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ABSTRACT

This bibliography cites 355 references to journal articles and other reports dealing with Acquired Immune Deficiency Syndrome (AIDS) and how it is being addressed through the health services delivery system. Annotations are arranged alphabetically by principal author within the following major categories: (1) bibliographies; (2) classification and definition of AIDS; (3) community services; (4) costs; (5) drug treatment and vaccines; (6) epidemiology; (7) federal policy; (8) health insurance and Medicaid coverage; (9) hospital use; (10) international information; (11) patient care and treatment; (12) prevention; (13) projections and trends; (14) state activities on AIDS; and (15) testing. Additional references (many from nontechnical periodicals) also are alphabetically listed at the end of each category. (Author/JD)

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September 1987

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Selected Bibliography on AIDS for Health Services Research

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September 1987

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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FOREWORD

This selected bibliography covers a broad range of published articles on the costs and utilization of health services by AIDS patients. In contrast to other AIDS bibliographies, which focus on the biomedical literature, this bibliography is concerned solely with major published articles useful to health services researchers studying the disease and how it is being dealt with through the health services delivery system. Included are articles in scholarly, scientific, and other major publications on such topics as insurance coverage by private and public programs, provision of care by hospitals and community services, the costs of that care, and policy issues.

This bibliography was constructed by 1) reviewing other bibliographies on AIDS; 2) reviewing the tables of contents of approximately 25 different health services research and scientific journals published between January and August 1987; 3) searching an on-line interdisciplinary AIDS bibliographic data base maintained by the Food and Drug Administration's medical library; 4) searching the Science Citation Index for articles that cite previously published works not listed elsewhere; 5) reviewing citations and references in articles obtained through the previous steps; and 6) reviewing newspaper articles from the *New York Times* and *Washington Post*.

The resulting bibliography contains annotated journal citations arranged alphabetically by principal author within topical categories. Abstracts as they appeared in the original article are reproduced here wherever possible. At the end of each major category, additional references (many of them from nontechnical periodicals) are also listed alphabetically.

The content of this bibliography is intentionally selective and is not intended to be comprehensive. For example, the section on Federal policy certainly does not reflect the full breadth of Federal activities on AIDS. Health education, testing, biomedical, and epidemiological literature are included only to the extent that they are relevant for health services research. Reports and memoranda reflecting AIDS activities by the Public Health Service and other Federal agencies are not included here because they will be inventoried by a comprehensive on-line data base to be maintained by an AIDS clearinghouse that is under development. Later, the clearinghouse will be expanded to include public and private resources and services for AIDS patients. The clearinghouse will be maintained by the AIDS Office of the Centers for Disease Control.

J. Michael Fitzmaurice, Ph.D.
Director

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BIBLIOGRAPHIES

1. Abrams, E.J. and K. Patrias (Reference Section, Public Services Division, National Library of Medicine), AIDS Bibliography 1986 - 1987. U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, June 1987.

This AIDS bibliography includes appropriate books, book chapters, and journal articles, many with publication dates in 1987.

2. Abt Associates, Inc., "An Annotated Bibliography of Scientific Articles on AIDS for Policymakers." Prepared for the Office of the Assistant Secretary for Health, Department of Health and Human Services (Contract #282-85-0064), Washington, D.C., May 1987 (available after November 15, 1987).

3. Institute for Health Policy Studies (School of Medicine, University of California, San Francisco), AIDS Bibliography, March 1987.

This short bibliography presents books, book chapters, journal articles, reports, speeches, lectures, and panel discussions dealing with AIDS. The selection covers health care policies, community responses, and the cost of AIDS to society and the individual. Contributors include Peter S. Arno, Philip R. Lee, Anne A. Scitovsky, and Mervyn F. Silverman. While several books were in press at the time this compilation was done, the majority of the bibliography items are dated 1986.

4. Institute for Health Policy Studies (School of Medicine, University of California, San Francisco), "Completed Institute AIDS Studies and an AIDS Bibliography." Institute for Health Policy Studies Report, Spring 1987, 7 (1): 4-7.

Eight completed studies are briefly described: (1) Community-based Services for AIDS Patients in San Francisco; (2) Policy Response to the AIDS Epidemic: New York and San Francisco; (3) The Federal Response to the AIDS Epidemic; (4) Resources for AIDS Patient Care and Research; (5) AIDS and Health Policy; (6) AIDS: Past, Present and Future Issues; (7) Personal and Social Consequences of AIDS Antibody Testing and Notification; (8) Estimates of the Direct and Indirect Costs of AIDS in the United States, 1985, 1986, 1991. Descriptive and quantitative information on the studies is provided along with the investigators' names, and the date and place of publication of the studies.

5. Converse, M.E., "ICD-9-CM Notes: Update on AIDS, 279.19." Journal of the American Medical Record Association, October 1985.

The World Health Organization Collaborating Center for Classification of Diseases for North America recommends that ICD-9-CM Code 279.19 be used to code acquired immunodeficiency syndrome (AIDS), including those cases where acquired T-Cell defect is documented.

6. Des Jarlais, D.C., S.R. Friedman, T.J. Spira *et al*., "A Stage Model of HTLV-III LAV Infection in Intravenous Drug Users." National Institute on Drug Abuse Research Monograph Series, 1986; 67: 328-34.

The purpose of this study was to interpret clinically the "meaning" of HTLV-III/LAV seropositivity among IV drug users, a task that "is complicated by scarcity both of longitudinal data on persons exposed to the virus and information about the hallmarks of the early stages of infection, the multiple effects of virus on the immune system, and immunologic change due to IV drug use in the absence of HTLV-III/LAV. . . . Primary subjects were 270 IV drug users recruited with informed consent from drug detoxification and methadone maintenance programs in New York City in 1984." Additional subjects were 29 IV drug users who met the CDC surveillance definition for AIDS. "Evidence [was found] for a cumulative order in lymphocyte abnormalities among persons with antibodies to HTLV-III/LAV. The abnormalities include a reversed T4/T8 ratio and low counts of T4 (helper) cells, total lymphocytes, and B cells. These abnormalities are cumulative in that a person who has any specific abnormality will typically have all of the preceding abnormalities in the order. The order generates a model for the stages of HTLV-III/LAV infection progression and provides a scale that is potentially useful for assessing the severity of infection at a single point in time."

7. Hardy, A.M., E.T. Starcher II, W.M. Morgan *et al*., "Review of Death Certificates to Assess Completeness of AIDS Case Reporting." Public Health Reports, July-August 1987; 102 (4): 386-91.

"[The purpose of this study was] to assess the level of reporting of AIDS cases. . . . The authors reviewed death certificates for periods of 3 months during July through December 1985 in each of four cities: Washington, DC, New York City, Boston, and Chicago. Since reporting began in 1981, these cities have reported 38 percent of all AIDS cases in the United States. Death certificates were selected and matched to the AIDS surveillance registries in each city, and medical records of those not on the AIDS registry were reviewed to determine if AIDS had been diagnosed. The estimated completeness of AIDS case reporting to AIDS surveillance systems was high in all four cities (ranging from 83 percent to 100 percent). The unreported cases were similar to reported cases in terms of sex, race, risk factor, and specific diagnosis. Of the causes of death examined, AIDS, *Pneumocystis carinii* pneumonia, and Kaposi's sarcoma were predictive of AIDS as defined by the CDC case definition. However, 77 of 588 deaths (13 percent) attributed to one of these three causes occurred in cases that were presumptively AIDS but did not meet the diagnostic requirements to be classified as AIDS for reporting purposes."

8. Haverkos, H.W., M.S. Gotlieb, J.Y. Killen et al., "Classification of HTLV-III/LAV-Related Diseases" [Letter]. Journal of Infectious Diseases, 1985; 152 (5): 1095.

This letter presents a stratification system for human T-lymphotropic virus type III/lymphadenopathy-associated virus (HTLV-III/LAV)-related diseases. The system includes seven categories characterized by various clinical features, such as immune thrombocytopenic purpura (ITP), unexplained palpable lymphadenopathy for more than 4 months, minor opportunistic infection, systemic prodrome or watery diarrhea or sustained weight loss, and AIDS--with and without Kaposi's sarcoma and with and without opportunistic infection.

9. Norman, C., "A Disease in Many Guises." Science, November 29, 1985; 230 (4929): 1019.

What will happen to the approximately one million people now infected with the AIDS virus is not likely to be known for another 20 years or so. A broad range of syndromes are occurring in people infected with AIDS. It is not known what distinguishes infected people who develop AIDS from those who develop AIDS-related conditions and those who remain free of symptoms. The primary question is what pushes the viral genes into action. Persons infected with the AIDS virus have experienced infection of the central nervous system, with resulting cortical atrophy, meningitis, and motor problems, as well as Guillain-Barre syndrome. Hodgkin's disease is occurring in AIDS patients, as is a bizarre form of Burkitt's lymphoma and squamous cell carcinoma of the head and neck.

10. Norman, C., "HTLV-III and LAV: Similar, or Identical?" Science, November 8, 1985; 230 (4726): 643.

This paper discusses the controversy over whether HTLV-III and LAV are the same virus or two different ones. The precise genetic sequences of the viruses indicate that HTLV-III and LAV are very similar, while ARV (for AIDS-related virus) is substantially different. With a genome of nearly 10,000 nucleotides, LAV and HTLV-III differ by only about 150 nucleotides; ARV differs by almost 600. Restriction enzyme maps of HTLV-III and LAV are identical, while those of all the other isolates differ from one another. Methodological difficulties that make matters even more complex are outlined.

11. Public Health Service, Centers for Disease Control, "Classification System for Human T-Lymphotropic Virus Type III/Lymphadenopathy-Associated Virus Infections." Morbidity and Mortality Weekly Report, May 23, 1986; 35 (20): 334-9. [Reprinted in Journal of the American Medical Association, July 4, 1986; 256 (1).]

A broadly applicable, easily understood classification system for persons infected with the AIDS virus is needed. The system presented is primarily applicable to public health purposes, including disease reporting and surveillance, epidemiologic studies, prevention and control activities, and public health policy and planning. Manifestations of HTLV-III/LAV infection are categorized in four mutually exclusive groups: Group I--acute infection; Group II--asymptomatic infection; Group III--persistent, generalized lymphadenopathy; and Group IV--other disease. Group IV includes five subgroups: constitutional disease, neurologic disease, secondary infectious diseases, secondary cancers, and other conditions.

12. Public Health Service, Centers for Disease Control, "Classification System for Human T-Lymphotropic Virus Type III/Lymphadenopathy-Associated Virus Infections." Annals of Internal Medicine, August 1986; 105 (2): 234-37.

"Infection with the human T-lymphotropic virus type III/lymphadenopathy-associated virus (HTLV-III/LAV) [now human immunodeficiency virus] can manifest as a spectrum of conditions ranging from severe immunodeficiency to asymptomatic infection. Because of the rapid growth of knowledge about this virus, there is a need for a system to classify patients with the various manifestations of infection. The system presented comprises four mutually exclusive groups: I, acute infection; II, asymptomatic infection; III, persistent generalized lymphadenopathy; and IV, other HTLV-III/LAV disease (with five subgroups, A to E, and two subcategories, C-1 and C-2). The classifications should be useful in disease reporting and surveillance, epidemiologic studies, prevention and control activities, and public health policy and planning."

13. Public Health Service, Centers for Disease Control, "Classification System for Human Immunodeficiency Virus (HIV) Infection in Children Under 13 Years of Age." Morbidity and Mortality Weekly Report, April 24, 1987; 36 (15): 225-36.

This paper reports on a classification system for HIV infection in children. It was designed primarily for public health purposes, including epidemiologic studies, disease surveillance, prevention programs, and health care planning and policy. Two definitions for infection in children are presented: one for infants and children up to 15 months of age who have been exposed to their infected mothers perinatally and another for older children with perinatal infection and for infants and children of all ages who acquired the virus by other means. Children who fulfill the definition of HIV infection may be categorized into Class P-1 (asymptomatic infection) or Class P-2 (symptomatic infection). Infants and children exposed perinatally whose infection status is indeterminate are in Class P-0. Children in Class P-1 may be further grouped on the basis of immunologic testing. Those in Class P-2 may be subclassified on the basis of the type of signs and symptoms present.

14. Public Health Service, Centers for Disease Control, "Revision of the CDC Surveillance Case Definition for Acquired Immunodeficiency Syndrome." Morbidity and Mortality Weekly Report, August 14, 1987; 36 (supplement no. 1S): 3S-15S.

A revised case definition for surveillance of AIDS was developed by CDC in collaboration with public health and clinical specialists. The revision's objectives were (1) to track the severe disabling morbidity associated with HIV more effectively; (2) to simplify AIDS reporting; (3) to increase the definition's sensitivity and specificity; and (4) to be consistent with current diagnostic practice. "Major proposed changes apply to patients with laboratory evidence for HIV infection: (1) inclusion of HIV encephalopathy, HIV wasting syndrome, and a broader range of specific AIDS-indicative diseases;. . .(2) inclusion of AIDS patients whose indicator diseases are diagnosed presumptively;. . . and (3) elimination of exclusions due to other causes of immunodeficiency." Differences in how the definition is applied to adults and children are described. The new definition is effective immediately.

15. Public Health Service, Centers for Disease Control, "Revision of the Case Definition of Acquired Immunodeficiency Syndrome for National Reporting--United States." Morbidity and Mortality Weekly Report, June 28, 1985; 34 (25): 373-75.

This paper reports a revision of the case definition of AIDS for national reporting in the United States. The revision provides that only the more severe manifestations of HTLV-III/LAV infection will be included; that CDC will develop more inclusive definitions and classifications of AIDS infection; that certain refinements will be adopted; that a histologically confirmed diagnosis of chronic lymphoid interstitial pneumonitis in a child under 13 will be considered indicative of AIDS unless tests for the virus are negative; that patients with a lymphoreticular malignancy diagnosed more than 3 months after an opportunistic disease marking AIDS will not be excluded as AIDS cases; and that a negative result on the serum antibody test without low numbers of T cells will exclude patients from an AIDS diagnosis. This revision will result in reclassification of less than 1 percent of cases already reported to CDC.

16. Redfield, R.R., D.C. Wright and E.C. Tramont, "The Walter Reed Staging Classification for HTLV-III/LAV Infection." New England Journal of Medicine, January 9, 1986; 314 (2): 131-32.

This paper reports on a staging classification for HTLV-III/LAV infection adopted by the U.S. Army. Its objectives were to provide uniformity within the military health care system for routine clinical evaluations of patients with such infections; to facilitate an understanding of the natural history of these infections; and to help evaluate the clinical response to antiviral treatment regimens. The staging scheme is applicable to adults only. Stage WR0 designates high-risk contacts. Stages WR1 through WR6 require documentation of infection by demonstration of HTLV-III antibody on Western blot or comparable confirmation assay using virus-specific antigens or virus isolation or both. Stage WR5 is defined by complete anergy or thrush or both. Certain conditions, such as Kaposi's sarcoma, neurologic disease, fever, night sweats, and significant weight loss, provide the basis for further staging.

Additional References

17. Staff, "CDC Revising AIDS Definition, Includes New 'Presumptive AIDS' Category." The AIDS Record, December 15, 1986; 1 (2): 1.

18. Staff, "Revised Definition of AIDS" [with flow diagram]. The Lancet, August 29, 1987; Vol. II for 1987 (8557): 522.

COMMUNITY SERVICES

19. Arno, P.S., "The Nonprofit Sector's Response to the AIDS Epidemic: Community-Based Services in San Francisco." *American Journal of Public Health*, November 1986; 76 (11): 1325-30.

"[This paper reports on the key role played by community-based organizations in San Francisco] in providing social support services and public information to those affected by AIDS. These services have helped minimize the economic impact of the epidemic by reducing the level and expense of hospitalization of AIDS patients. During fiscal year 1984-85, the three largest community-based groups in San Francisco provided more than 80,000 hours of social support and counseling services, responded to more than 30,000 telephone inquiries and letters, and distributed nearly 250,000 pieces of literature. Home-based hospice care was provided to 165 AIDS patients at an average daily cost of $94 per patient. Community-based organizations require. . .significant. . .funding from government and private sources. Local government in San Francisco has provided 62 percent of the revenues for these groups. [But] they are not viable without steady volunteer labor. More than 130,000 hours were donated [in the preceding year]. There are intrinsic limits to the current dependency on unpaid labor and contributions made by private charity and local government [that] will eventually require increased support and intervention at the state and federal levels."

20. Arno, P.S. and R.G. Hughes, "Local Policy Responses to the AIDS Epidemic: New York and San Francisco." *New York State Journal of Medicine*, May 1987; 87: 264-72.

"[This paper examines the factors that have contributed to different policy responses to AIDS in New York City and San Francisco. Together, New York City and San Francisco have reported more AIDS cases than any other cities in the world; they account for 40 percent of the national reported total throughout 1986.] Both cities have spent enormous amounts of local resources in dealing with the epidemic, but the public policy response has been markedly different in each city. . . . [H]istorically, New York has had three times the AIDS caseload of San Francisco, [but] has consistently spent less money on public health education and other nonhospital-related health care services. The varied policy responses in each city can be attributed to several factors: differences in the magnitude of the epidemic; the patient mix; the role of risk groups in the political and economic life in each community; the scale of public health care systems, including the number of medical schools; the impact of local media; and the institutional roles of the respective health departments. [These cities' experiences may prove useful.] They indicate that each community's response to AIDS will likely reflect the underlying social, economic, and political characteristics of AIDS victims and the existing structure and organizational roles of traditional health care and community-based providers."

Community Services

21. Goldsmith, M. F., "Many Groups Offer AIDS Information, Support." Journal of the American Medical Association, 1985; 254 (18): 2522-23.

Resource centers for information, counseling, and support for persons dealing with AIDS have been established around the country. Some of these groups supply medical services or referrals to physicians knowledgeable in this area. This report supplies the names, addresses, and telephone numbers of 11 national organizations and 28 local organizations in 20 states, the District of Columbia, and Canada. The list includes information and support groups and government information hot lines.

22. Goulden, T., P. Todd, R. Hay et al., "AIDS and Community Supportive Services: Understanding and Management of Psychological Needs." Medical Journal of Australia, 1984; 141 (9): 582-86.

At a public meeting held in response to the first outbreak of AIDS in Australia, three important needs emerged for Sydney's gay community: (1) to monitor the reaction of the Australian media to AIDS, (2) to approach the Department of Health to present the community's case for medical and public health responses to the disease; and (3) to provide educational and support services for people with AIDS and for those with immunodeficiency. Changing behavior, in terms of safer sexual habits and intravenous drug use, will probably be a major factor in controlling the spread of AIDS in Australia. Health education should be subtle and include an awareness that more is needed than facts. Complications can emerge from the patient's family discovering his homosexuality for the first time and from the patient's lover and friends contending with fear, grief, survivor guilt, and anger. Planning is needed to coordinate home help services and to establish support groups and psychological assistance for future AIDS patients and the people close to them.

23. Groopman, J.E. and A. S. Detsky, "Epidemic of the Acquired Immunodeficiency Syndrome: A Need for Economic and Social Planning." Annals of Internal Medicine, 1983; 99 (2): 259-61.

This paper points out that major national planning efforts are needed to enable the health care system, as well as the research infrastructure, to tackle the AIDS epidemic. Planning is needed to help deal with the coming health care costs, as well as limits on the care available for people with other disorders. Planning will be needed for ambulatory care and acute care facilities and personnel. Regulatory agencies that monitor third-party payment response should begin to plan their strategy now. Recruitment of blood donors from low-risk groups will be necessary, as well as blood processing. Education for persons at high risk of developing the syndrome is likely the greatest area for prevention. Sensitivity to human rights is vital, and high-risk groups must be protected from overt or covert backlash. Economic and social planning must be initiated.

Community Services

24. Hamilton, J. O'C., "Volunteers, Home Care, and Money: How San Francisco Has Mobilized." Business Week, March 23, 1987: 125.

San Francisco has earned its "pioneering role" in caring for AIDS patients through the work of a fraternity of health care professionals, volunteers, researchers, and service organizations. At Coming Home hospice, patients are cared for at a daily price of $140, compared with up to 10 times that in hospitals. The foundation of the city's mobilization is the gay community. City and corporate funds are being spent to support efforts in education, research, care, and other services. Patients discharged from the hospital have access to an organized home health care network for as little as $90 a day. The Shanti Project, a volunteer organization, provided 110,000 hours of support for 80 percent of the city's AIDS population last year. Volunteers are growing scarce, however, and burnout among medical personnel, along with the growing AIDS population, are subjects of great concern. A local hematologist has called for federal planning and the establishment of national regional hospitals that specialize in treating AIDS.

25. Helgerson, S., "AIDS Project in Seattle, Washington." American Journal of Public Health, 1984; 74 (12): 1419.

This paper reports on the AIDS Assessment, Education and Surveillance Project established in Seattle by the King County and Seattle City Councils. The project includes educational activities, the AIDS Assessment Clinic, and a research effort. Although aggregate data will be reported, patients' confidentiality will be strictly protected.

26. Kutzen, H., "A Community Approach to AIDS Through Hospice: Louisiana Program Promotes High Quality of Life." American Journal of Hospice Care, March-April 1986; 17-23.

This paper reports on the impact of AIDS in New Orleans. The Hotel Dieu Community Hospice, the New Orleans AIDS Task Force, the Foundation for Health Education in New Orleans, as well as state agencies have been involved in combatting AIDS. Legal support came from the Lambda Legal Defense Fund, the Gay Rights National Lobby, and the ACLU. Support groups for patients with AIDS, ARC, and persons in high-risk groups have been formed. The Buddy System trains volunteers,and the Archdiocese of New Orleans has helped provide free housing to indigent ambulatory persons with AIDS. The city's gay male community began support efforts, and the Louisiana AIDS Community Network coordinates resources. Among the special problems presented by AIDS in the hospice setting are symptom control, infection control, and dealing with wide-ranging emotional responses to diagnosis by patients and their loved ones. Hospice is an alternative to hospitalization and traditional home care services for persons with AIDS.

Community Services

27. Martin, J.P., "The AIDS Home Care and Hospice Program: A Multidisciplinary Approach to Caring for Persons with AIDS." *American Journal of Hospice Care*, March-April 1986; 35-37.

This paper reports on the multidisciplinary approach of the AIDS Home Care and Hospice Program VNA of San Francisco. Such multidisciplinary teams should consist of at least six key professionals: attendants (home health aides/homemakers), nurses, social workers, volunteers, rehabilitation therapists, and physician consultants. A basic introduction to AIDS, the hospice philosophy, pain and symptom management, infection control, psychosocial issues, and bereavement concerns should be included in orientation and education for staff members. Support groups, time off, adequate supervision, and ongoing team conferences are necessary to help staff deal with the potential "burnout" of working with AIDS patients. Individual hospices should address the needs of staff, community and expected patients before the first AIDS case arrives.

Additional Reference

28. Staff, "Survey Finds Support for AIDS Patients." *New York Times*, May 22, 1987.

COSTS

29. Arno, P.S., "AIDS: A Balancing Act of Resources." Business and Health, December 1986; 3 (12): 20-24.

As the AIDS epidemic has placed increasing strains on the health care system, it has also highlighted some pressing issues in today's rapidly changing health care environment, while posing questions about the Federal Government's ability to respond to a public health emergency, the financing of health care, and the role of community-based organizations in managing catastrophic illness. Early in the AIDS epidemic, federal response was marred by a lack of coordination among government agencies, slow and insufficient funding, and an emphasis on biomedical research at the expense of health education and prevention programs. Although lack of chronic care is not new, its effects are particularly hard on AIDS patients. In large cities, AIDS patients do get some assistance from community-based organizations, but such models are not available nationwide. How society decides to fight AIDS will have a profound impact on the future of health policy in this country.

30. Berger, R., "Cost Analysis of AIDS Cases in Maryland." Maryland Medical Journal, December 1985; 34 (12): 1173-75.

"During the first half of 1985, 69 newly diagnosed cases of AIDS were reported to the Maryland Department of Health and Mental Hygiene (DHMH). Planning for the epidemic has been difficult. This report is the first cost analysis of AIDS cases in Maryland. The projected hospital cost for AIDS patients in 1985 is $4.125 [million, very] likely a conservative estimate."

31. Bowen, B.D., "The Medical Costs of AIDS in California," preliminary draft, presented to the American Public Health Association, Las Vegas, October 1, 1986, Blue Cross of California.

This paper reports efforts to estimate medical expenses of AIDS patients based on insurance company claims data. The problems involved in using such data are discussed. Identifying AIDS cases presented a problem in terms of coding criteria and how they are applied. In addition, cases with no hospital stays were excluded. The sample set studied was not representative of AIDS cases in California. Northern California is over-represented, while persons whose insurance is not purchased through a group were excluded. The data analyzed were for 189 persons and 7,465 claims. Unlike many AIDS populations, however, all the cases studied were employed when diagnosed. Differences in the number of days per hospital stay accounted for most of the variance in cost per case. In Los Angeles, that figure was $46,671; it was $33,909 in San Francisco. The only deaths reported occurred in the hospital setting.

32. Burda, P. and S. Powills, "AIDS: A Time Bomb at Hospitals' Door." Hospitals, January 5, 1986; 60 (1): 54-61.

Costs

The national cost per day for an AIDS patient, according to CDC, is $830--double the average cost of treating patients with other disorders. Hospitals around the country face enormous risks in the AIDS epidemic. St. Luke's-Roosevelt Hospital Center in New York City treats an average of 55 AIDS patients daily; the hospital loses more than $200 a day per AIDS patient. Isolating AIDS patients in private rooms is used by some hospitals as a way to try to avoid increasing staff. Some hospitals, such as San Francisco General Hospital Medical Center, concentrate on discharge planning. Isolating AIDS patients can create the potential for problems, however, from discrimination suits by gay rights groups. Worried staff members are another problem, and the need for education is significant and ongoing. Routine blood screening is not recommended, but should be available to staff requesting it. Dealing with staff members who become ill with AIDS themselves is yet another threat to hospitals.

33. Clark, J. and D. B. McCallum, The Adequacy of Hospital Reimbursement for AIDS Patients. Institute for Health Policy Analysis, Washington, D.C., 1987.

"The purpose of this study was to explore the financial strain that AIDS patients have placed on hospitals since 1982. The research seeks to determine what proportion of hospitals' estimated cost of treating AIDS patients was reimbursed by various payers: commercial insurers, Blue Cross/Blue Shield, Medicaid, and self-pay/indigents at two Washington, D.C., hospitals." Secondly, the efficacy of using Medicare's DRGs for reimbursing AIDS care was evaluated. Data from 141 Georgetown University Hospital admissions and 33 D.C. General admissions were studied, for a total of 174 admissions. The results suggest that hospitals are adequately reimbursed when the payer is a commercial insurer or Blue Cross/Blue Shield. Medicaid results fluctuate significantly and are difficult to interpret. The results indicate that two DRGs often used for AIDS patients (DRG 398 and DRG 79) may not accurately reflect the quantity of hospital resources used to treat such patients. If hospitals are to be adequately reimbursed through DRGs for AIDS patients, it may be necessary to create a new DRG (or DRGs) for the AIDS population.

34. Firshein, J., "AIDS Stretching VA's Ability to Treat Veterans." Hospitals, February 20, 1986; 60 (4): 33-34.

Manhattan Veterans Administration Medical Center treats more AIDS patients than any other VA facility in the country. Of 120 acute care beds, 23 are filled with AIDS patients daily. The VA estimates it will spend about $40 million a year to treat veterans with AIDS. If the rate of AIDS admissions increases, VA hospitals' capabilities may be stretched to the breaking point.

35. Hardy, A.M., "Planning for the Health Care Needs of Patients with AIDS." Journal of the American Medical Association, December 12, 1986; 256 (22): 3140.

Costs

The estimated direct health care costs for the 145,000 AIDS patients anticipated to need treatment in 1991 is between $8 billion and $16 billion. The AIDS epidemic will also place an enormous burden on acute care facilities and may increase the need for hospital beds. Such alternatives as home care, hospices, and long-term care facilities will be needed. Unemployed or low-income patients have inadequate insurance coverage already, and many AIDS patients who become unemployed will lose their coverage. Dependence on city, State, and Federal health care programs will grow.

36. Hardy, A.M., K. Rauch, D. Echenberg et al., "The Economic Impact of the First 10,000 Cases of Acquired Immunodeficiency Syndrome in the United States." Journal of the American Medical Association, January 10, 1986; 255 (2): 209-11.

"AIDS is a serious, fatal disease affecting a relatively young population and has a great economic impact. Expenditures for hospitalization and economic losses from disability and premature death were estimated for the first 10,000 patients with AIDS reported in the United States. Extrapolation of data from surveys done in New York City, Philadelphia, and San Francisco suggests that these 10,000 patients will require an estimated 1.6 million days in the hospital, resulting in more than $1.4 billion in expenditures. Losses incurred for the 8,387 years of work that will be lost from disability and from the premature death of the 10,000 people will be more than $4.8 billion. The total economic burden of the AIDS epidemic will continue to rise as the number of diagnosed cases increases. These estimates reinforce the need for effective disease prevention strategies to reduce the number of cases."

37. Iglehart, J.K., "Financing the Struggle Against AIDS." New England Journal of Medicine, July 16, 1987; 317 (3): 180-84.

The federal government has only begun to address how the battle against AIDS will be waged, who will command it, and how government and the private sector will pay for it. Since 1981, federal spending for biomedical research, public health measures, and patient care has risen from $5.5 million to an estimated current level of $416 million in fiscal 1987 at DHHS alone. The nation's approach to AIDS has been evolutionary. Social and political aspects of the matter have been key to how it has been handled. Congress and the media have been instrumental in the recent growth in funds and attention paid to the problem. While the national response to AIDS has pointed out the diversity of reaction to the health crisis, it has also stressed the weaknesses of a system of combined private and public medical care financing that requires patients with AIDS to become impoverished before they are eligible for Medicaid. Many more people are left at financial risk since, when they become too ill to work, they lose their health care coverage.

38. Johnson, A.M., M.W. Adler and J.M. Crown, "The Acquired Immune Deficiency Syndrome and Epidemic of Infection with Human Immunodeficiency Virus: Costs of Care and Prevention in an Inner London District." British Medical Journal, August 23, 1986; 293 (6545): 489-92.

"The epidemic of AIDS and infection with HIV necessitates early planning of services and allocation of resources. The use of hospital resources by patients with AIDS and the planned additional costs of clinical and preventive services for the epidemic of infection with HIV were calculated for an inner London health district that has treated 18 percent of the cases in the United Kingdom. Patients with AIDS required on average 50 days of inpatient hospital care each at an estimated current average lifetime cost of 6,800 pounds [$4,143, as of 10/8/87]. These costs, however, underestimated the additional capital and revenue costs of planned new preventive and treatment services, estimated at 388,000 pounds revenue [$236,370, as of 10/8/87] and 472,000 pounds [$287,542, as of 10/8/87] capital for 1986-87. It is important to invest now in preventive services throughout the United Kingdom to reduce the future social and financial costs of AIDS."

39. Kizer, K., Acquired Immune Deficiency Syndrome in California: A Prescription for Meeting the Needs of 1990. Report prepared by the California Department of Health Services, March 1986.

This report was compiled and edited by the Department of Health, with input from the University of California Systemwide AIDS Task Force and the State Departments of Mental Health, Alcohol and Drug Programs, and Corrections. Costs for medical care alone for the 30,000 cases of AIDS that are expected to have occurred in California by the end of 1990 will approach $3.5 billion; about $270 million of that will come from the Medi-Cal program. Total public health and medical care expenditures for AIDS virus infections in the State in this period are expected to exceed $5 billion. Proposed for FY 1986-87 are the following: expansion of the AIDS preventive education program, AIDS surveillance programs, pilot projects to provide less costly AIDS treatment, preventive education through the AIDS antibody test site program, and State support services for confirmatory testing and virus culturing. An increase in the number of epidemiological investigations on related problems is proposed, as well as creation of special AIDS researcher positions at the University of California. Budget additions of $6.388 million to the Department of Health Services and of $2 million to the University of California are recommended to implement these proposals. Major urban areas where AIDS case have been reported are encouraged to establish AIDS treatment centers. Legislative changes are recommended to allow mandatory AIDS virus antibody testing when compelling public health needs exist and to permit information reporting to public health and medical authorities when indicated.

Costs

40. Kizer, K.W., J. Rodriguez, G.F. McHolland et al. A Quantitative Analysis of AIDS in California. California Department of Health Services, State of California, Sacramento, March 1986.

This report presents estimates of health care costs of AIDS in California. Relevant data sources were reviewed, including AIDS Section Registries of the Department of Health Services, Medi-Cal paid claims, Medi-Cal eligibility tapes, and Vital Statistics death registries. The average medical care costs of a Medi-Cal AIDS patient from disease onset until death was $59,000, based on a life expectancy of 18 months from diagnosis to death. The average cost to Medi-Cal for AIDS patients was lower in San Francisco ($52,000) than in Los Angeles ($70,000) or in the rest of the state ($65,000). Medical costs for AIDS patients not on Medi-Cal were estimated from billed amounts on the Medi-Cal claims. The average cost for medical care for an AIDS patients in California is estimated at $91,000; it is $74,000 in San Francisco and $109,000 in Los Angeles. Use of hospital care varied widely. The average length of stay per admission in San Francisco was 12.1 days, while it was 17.9 in Los Anglees. The statewide average was 14 days. In contrast to national patterns, California AIDS pateints are disproportionately white (83 percent). DHS figures are estimated to understate the extent of California AIDS cases, as defined by definitions seem too restrictive and that AIDS statistics should be based on the patients' place of residence. The department also designated five new code numbers for billing treatment of AIDS patients to Medi-Cal.

41. Kizer, K.W., J. Rodriguez and G.F. McHolland, An Updated Quantitative Analysis of AIDS in California. California Department of Health Services, State of California, Sacramento, April 1987.

This report updates findings about the demography and health care costs of AIDS in California. Several data sources, including AIDS Registries of the Department of Health Services, Medi-Cal paid claims, Medi-Cal eligibility tapes, and hospital charge data, were reviewed. Data through September 1986 are included in the analysis. Identified as Medi-Cal beneficiaries were 1,103 AIDS patients. The proportion of AIDS patients covered by Medi-Cal is 20 percent, compared with 12 percent the previous year. Medi-Cal expenditures for AIDS cases from July 1983 through August 1986 were $20.5 million. Of Medi-Cal's AIDS expenditures, hospital inpatient costs account for 87.1 percent; this proportion was lower in San Francisco (85 percent) and higher in Los Angeles (89.6 percent). As of August 1986, the cumulative medical care costs for AIDS patients in California who have not been covered by the Medi-Cal program is estimated at $131.2 million. The total cost of reported AIDS cases, Medi-Cal or otherwise, is estimated at $151.7 million. The Medi-Cal costs for AIDS-related complex (ARC) are estimated at $1 million. The duration of in-patient hospital stay was found to be 13.6 days statewide: 15.8 in Los Angeles, 11.4 in San Francisco, 17.9 in San Diego, and 13.4 in all other counties. Steep growth in the number of reported cases and associated costs is consistently indicated by the evidence. A continuation of past growth patterns is assumed.

42. Lee, P.R., "AIDS: Allocating Resources for Research and Patient Care." Issues in Science and Technology (National Academy of Sciences), Winter 1986; 2 (2): 66-73.

This study examines the allocation of federal resources for AIDS research and patient care. When the federal government designated AIDS its number one health priority in May 1984, more than 3,000 cases had already been reported and thousands infected with the virus. Many critics believe that insufficient funding and personnel early in the epidemic limited effective surveillance activities and epidemiological studies and thwarted medical researchers' ability to respond promptly. It has been suggested that a more vigorous public health education effort might have helped curb disease transmission. The author finds that the inadequate federal response was heavily influenced by efforts of the Reagan administration to reduce spending on domestic social programs, to shift federal responsibilities to state and local governments, and to encourage greater competition and an expanded private sector role in health care. Although Congress has now provided adequate additional funds for AIDS research, the growing burden of caring for AIDS patients falls on a health care delivery system suffering from the lack of a national health insurance program or any coherent national policy for financing health care.

43. Office of New York State Comptroller, Office of the Special Deputy Comptroller for the City of New York, "Projected Costs of the Treatment of Acquired Immune Deficiency Syndrome in New York City," Report 11-88, July 8, 1987.

This report projects that by 1991, the total annual cost of treating AIDS in New York City--including Medicaid, Medicare, and all other public and private payers--could be nearly $2 billion. Slightly more than half of this amount represents public funds, including $450 million in city funds alone. This estimate reflects only the costs associated with inpatient hospital care, which now constitute almost 80 percent of AIDS-related expenditures in the city. Other costs are for outpatient treatment and other AIDS services. Although these other costs could be significant, a severe lack of information makes long-range projections impossible. The city projects that expenditures for AIDS within New York City--from all sources--will total $385 million, of which $98 million will be city funds. The city's projections are based on historical caseload data, an approach that may be too limited in that it fails to consider a growing body of scientific knowledge that suggests that the incidence of AIDS could grow much faster than the city has assumed. Thus, the city is vulnerable to unanticipated cost increases for the treatment of AIDS. The report reveals a dichotomy between New York City's programmatic and fiscal responses to the crisis. On the programmatic side, the city has moved to expand dramatically its public education efforts and the services available for AIDS patients and high-risk groups. On the fiscal side, however, the city has been slow to respond; a long-promised AIDS cost study has not been completed and issued. Although the city has not developed specific estimates of total AIDS expenditures for fiscal years 1989 through 1991, officials maintain that the Financial Plan includes sufficient funding to meet the expenses associated with their AIDS caseload estimates, which are based on historical data. This funding has not been identified or quantified. Funding levels in the Financial Plan could require significant increases. The city's programmatic initiatives could ultimately be jeopardized because funding levels for those initiativesor for other services might have to be cut back to accommodate the costs of providing hospital care for AIDS patients.

44. Office of Technology Assessment (J.E. Sisk, Study Director), The Costs of Aids and Other HIV Infections: Review of the Estimates. Staff Paper, May 1987.

This paper analyzes the reasons behind widely divergent estimates of the costs associated with AIDS. Because the methods used varied significantly, the results were not strictly comparable across studies. With past survival and treatment patterns, the studies suggest that AIDS lifetime hospital costs have most likely been under $100,000; annual treatment costs for patients alive at any time during the year have most likely been under $40,000. The studies give an incomplete picture of costs, however, since they generally excluded most services outside the hospital and pertained only to adult AIDS patients, not to pediatric patients or to those with other manifestations of HIV infection. The most comprehensive and rigorous study of national costs attributed a pricetag of $8.7 billion to AIDS in 1986 and predicted costs of $66.5 billion by 1991. More than 80 percent of the amount stemmed from losses in productivity, reflecting the fact that AIDS afflicts mainly working-age adults. Because knowledge and treatment of the disease are changing constantly, great uncertainty surrounds these and other cost projections. Further transmission of the disease has not yet peaked, and the percentage of the HIV-infected population that develops outright AIDS continues to increase. This disease has become a special case because of the increasing prevalence of AIDS and HIV infection, its unexpected arrival and uncertain course, and the age groups afflicted. Continued transmission of the virus raises the issue of how to allocate resources between prevention and treatment and among preventive activities, including education and counseling.

45. Pascal, A., The Costs of Treating AIDS Under Medicaid: 1986-1991, Rand Note, prepared for the Health Care Financing Administration, U.S. Department of Health and Human Services, May 1987.

This paper reports the results of a 5-month research effort to estimate Medicaid costs for treating AIDS patients. The study concentrated on people who met the CDC definition of AIDS. It is estimated that 220,000 cases will require treatment between 1986 and 1991. Although that figure might serve as a low-range estimate, case load numbers of 400,000 and 750,000 in 1986-1991 are more credible mid- and high-range estimates. It is necessary to project the shares of case load accounted for by various patient groups because they vary in initial health and insurance coverage and diagnoses, and each requires different treatment. Such variations have distinct cost implications, particularly for Medicaid. Patient-group-share trends show increasing proportions of IV drug users and the heterosexuals they infect and declining proportions of homosexual/bisexual males. Cancers of the soft tissue will decline, relatively, as an associated pathology, whereas pulmonary infections and neurologic impairments will increase.

AIDS patients qualify for Medicaid when they meet state income and resource limitations. Since most stop earning income and have only modest assets, use of Medicaid depends largely on the adequacy of private health insurance coverage. A substantial fraction of patients have no coverage because they are unemployed; another large fraction may lose coverage because of the gaps in continuation guarantees under the Consolidated Budget Reconciliation Act of 1986 (COBRA); others may exhaust these COBRA protections. Employer and insurance company discrimination against actual or potential AIDS patients threatens to deprive some patients of coverage. Public hospitals are likely to qualify an increasing number of them for Medicaid. Published estimates of average lifetime treatment costs for AIDS patients range from $70,000 to $150,000. The variation is due largely to the differences in hospitalization periods for AIDS treatment. Extension of the low-cost case management model to places outside San Francisco, which may not be feasible, would substantially lower average costs. In some high-impact communities, AIDS could force construction of new skilled nursing facilities or, less likely, new hospitals. Medical interventions (such as azidothymidine, AZT) promise lower per-period treatment expenditures but may raise lifetime costs by increasing the survival rate. AZT does tend to delay access to Medicaid, since it helps keep people at work. Policy changes would likely have major cost consequences. For example, widening the official definition of AIDS would raise Medicaid costs; ending automatic disability status for victims would lower them. Successful promulgation of the case management approach would reduce treatment costs. Current Medicaid reimbursement policies are thought to influence treatment toward hospitalization. Pressure to raise reimbursement rates also seems likely. The virus's long incubation period and patients' growing life expectancies mean, under current policies, more AIDS patients will use Medicare over time. The overall cost consequences of a diversion from Medicaid to Medicare are unpredictable.

Combining assumptions on case load, Medicaid eligibility, average treatment costs, and Medicaid reimbursement rates yields a range of estimates for cumulative Medicaid costs in 1986-1991. The intermediate estimate is about $10 billion, although the most optimistic assumptions yield an estimate as low as $2 billion, and the most pessimistic one as high as $47 billion. The intermediate estimate for total national medical costs over this period is about $38 billion, with corresponding extreme estimates of $15 billion and $113 billion. Using intermediate estimates, AIDS will account for about 1 percent of total national spending on health and about 3 percent of Medicaid program costs. According to the most pessimistic scenario, AIDS spending will absorb 13 percent of Medicaid dollars.

46. Scitovsky, A.A., M. Cline and P.R. Lee, "Medical Care Costs of Patients With AIDS in San Francisco." Journal of the American Medical Association, December 12, 1986; 256 (22): 3103-06.

"This article reports. . .the findings of a study of medical care expenditures of persons with AIDS treated at San Francisco General Hospital in 1984. . .. [The mean charge] per AIDS hospital admission was $9,024; mean charges of patients with AIDS who received all their hospital inpatient and outpatient care at San Francisco General Hospital in 1984 ranged from $7,026 to $23,425, and mean lifetime inpatient charges of patients with AIDS who died and who had received all their inpatient care at the hospital were $27,571. These latter charges were considerably lower than previously published estimates of lifetime direct medical care costs of patients with AIDS, and the possible reasons for the differences include much lower lifetime use of hospital services and somewhat lower cost per hospital day."

47. Scitovsky, A.A. and D.P. Rice, "AIDS: The Cost in Dollars." The Internist, April 1987, 9-15.

This paper reports on a series of new estimates of the direct and indirect economic costs of AIDS in the United States. Estimates were formulated for direct costs for personal medical care costs and nonpersonal costs. Personal medical care costs include expenditures for hospital services, physician inpatient and outpatient services, outpatient ancillary services, and nursing home, home care, and hospice services. Nonpersonal costs include those spent for research, blood screening and testing, replacement of blood, health education and support services. Indirect costs include morbidity costs and mortality costs. The value of productivity losses due to illness and disability constitutes morbidity costs. Mortality costs are the present value of future earnings lost for those who died prematurely because of AIDS. According to estimates for 1985, 1986, and 1991, indirect costs due to morbidity, and especially premature death, make up about 80 to 84 percent of the total economic cost of the AIDS epidemic.

48. Scitovsky, A.A. and D.P. Rice, "Estimates of the Direct and Indirect Costs of Acquired Immunodeficiency Syndrome in the United States, 1985, 1986, and 1991." Public Health Reports, January-February 1987; 102 (1): 5-17.

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"This paper presents three estimates--ranging from low to high--of the direct and indirect costs of the AIDS epidemic in the United States in 1985, 1986, and 1991, based on prevalence estimates provided by the Centers for Disease Control. According to what the authors consider their best estimates, personal medical care costs of AIDS in current dollars will rise from $630 million in 1985 to $1.1 billion in 1986 and to $8.5 billion in 1991. Nonpersonal costs (for research, screening, education, and general support services) are estimated to rise from $319 million in 1985 to $542 million in 1986 to $2.3 billion in 1991. Indirect costs attributable to loss of productivity resulting from morbidity and premature mortality are estimated to rise from $3.9 billion in 1985 to $7.0 billion in 1986 to $55.6 billion in 1991. While estimated personal medical care costs of AIDS represent only 0.2 percent in 1985 and 0.3 percent in 1986 of estimated total personal health care expenditures for the U.S. population, they represent 1.4 percent of estimated personal health care expenditures in 1991. Similarly, while estimated indirect costs of AIDS represent 1.2 percent in 1985 and 2.1 percent in 1986 of the estimated indirect costs of all illness, they are estimated to rise to almost 12 percent in 1991."

49. Scitovsky, A.A., D.P. Rice, J. Showstack et al., "Final Report: Estimating the Direct and Indirect Economic Costs of Acquired Immune Deficiency Syndrome, 1985, 1986, and 1990." Prepared for The Centers for Disease Control (Task Order 282-85-0061 #2), March 31, 1986.

This report estimates the direct and indirect costs of AIDS in the United States for the years 1984, 1985, 1986, and 1990. Estimates are based on prevalence estimates provided by CDC, which classified by age and sex all AIDS cases alive at any time in 1984 into three patient groups: (1) those diagnosed in the previous year who lived all 12 months, (2) those who died during the year, and (3) those who were newly diagnosed and did not die. Within each of the groups, cases were grouped into the following diagnostic categories: Pneumocystis carinii pneumonia, other infectious diseases, Kaposi's sarcoma, neoplasms, and other conditions. These detailed distributions of AIDS cases were provided by CDC for 1984, the first year that health departments in the country confirmed all cases using the strict definition of AIDS. Also, 1984 data are complete, without reporting lags. CDC estimated the total number of cases in each of the other years and assumed that the distribution by age and sex between these patient groups and diagnostic groups within each patient group remained the same over time. Estimates were made for direct costs, including personal medical care costs and nonpersonal costs, and for indirect costs, including those for morbidity and mortality. Psychological costs were not estimated. All estimates are in 1984 constant dollars unless otherwise noted. The direct medical care costs make up three-fifths of the total direct costs; the remaining two-fifths are the nonpersonal costs. The indirect losses incurred by AIDS patients are significantly larger than the medical care and nonpersonal costs because AIDS affects many persons during their most

Productive times. Of the total estimated indirect costs of $3.3 billion in 1985, 6 percent are for morbidity losses, the estimated value of losses in productivity resulting from illness and disability for the 15,400 AIDS cases. The remaining 94 percent of the indirect costs are the estimated value of productivity losses for 5,500 persons who died prematurely in 1985 from AIDS. With the projected increase in prevalence, the total economic costs of AIDS will increase commensurately. The number of AIDS cases is estimated to rise from 15,400 cases in 1985 to a high of 76,500 cases in 1990; the total direct and indirect costs are estimated to rise from $4.1 billion in 1985 to $19.6 billion in 1990. The distribution by costs by type remains fairly constant. Applying the expected years of life lost by age and sex to the 5,500 deaths in 1985 results in a total of 217,693 person years lost, an average of 40 years per death. If losses of future earnings and an imputed value for housekeeping services by age and sex are taken into account, $3.1 billion was lost to the economy at a 4 percent discount rate for the 5,500 deaths in 1985. For the 5,046 men estimated to have died in 1985, losses are valued at $2.9 billion. Men account for 92 percent of the deaths, 90 percent of the person years lost, and 94 percent of the mortality costs.

50. Seage, G.R. III, S. Landers, M.A. Barry et al, "Medical Care Costs of AIDS in Massachusetts." Journal of the American Medical Association, December 12, 1986; 256 (22): 3107-09

"Previous investigation has suggested that the direct cost of medical care for the 24,011 reported patients with AIDS may be as high as $147,000 per patient. To evaluate the use and cost of medical services for patients with AIDS in Massachusetts. . .[a] 1-year cost of illness study of 45 AIDS patients [was performed]. Sociodemographic and clinical data as well as information on medical utilization were obtained from a review of outpatient and hospital records. Patients with AIDS required a mean of 3.3 (plus or minus 3.2) hospitalizations per year and 18.4 (plus or minus 21.8) ambulatory visits per year. Overall, medical costs averaged $46,505 plus or minus $38,720 per patient per year, with 91 percent of these expenditures related to use of inpatient services. These results suggest that the cost of medical care for AIDS patients may be substantially less than previously estimated."

51. Sisk, J.E., "The Costs of AIDS: A Review of the Estimates." Health Affairs, Summer 1987, 6 (2): 5-21.

Estimates of the costs associated with AIDS have varied tremendously. Lifetime hospital costs for an AIDS patient have been reported from $24,517 to $147,000. Financing reports also range widely. Medicaid has been reported to cover the care of 7 to 65 percent of AIDS patients and private insurance to cover between 13 and 65 percent. This report analyzes the reasons for these differing cost estimates in 18 studies. Problems in predicting costs associated with AIDS are discussed, and issues related to future estimates are raised.

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53. Blustein, P., "Public Spending on the Epidemic Will Exceed $1 Billion This Year." Wall Street Journal, May 18, 1987.

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55. Dunne, R. and T. Sweeney, "Who Will Pay for AIDS, and How? All Of Society." New York Times, June 22, 1987.

56. Okie, S., "AIDS Toll Masks Immensity of Threat." Washington Post, March 25, 1987.

57. Okie, S., P. Berg and D. Colburn, "AIDS Notebook: Hospital Reports Costs of $1,000 a Day." Washington Post, June 3, 1987.

58. Staff, "Insurers' Study Sees AIDS Cost of $50 Billion: 13-Year Estimate Is for Existing Life Policies." New York Times, August 5, 1987.

59. Sullivan. R., "Bill of $1 Billion for Treating AIDS Seen in New York." New York Times, May 22, 1987.

60. Taravella, S., "Alternative Care Helps Firms Reduce Costs to Treat AIDS." Business Insurance, 1985; 19(1).

DRUG TREATMENT AND VACCINES

61. Bosy, L., "Human Testing of AIDS Vaccine to Begin." American Medical News, June 12, 1987.

The first phase of human testing of a vaccine against AIDS will begin in fall 1987; it is expected to take about a year. The first step is to determine the drug's pharmacological actions--dosage range, absorption, metabolization, and excretion. Because of the virus's long incubation period, an effective vaccine may not be available for up to 10 years. Because the AIDS-linked virus mutates quickly, several vaccines may be needed.

62. Fischl, M.A., D.D. Richman, M.H. Grieco et al., "The Efficacy of Azidothymidine (AZT) in the Treatment of Patients with AIDS and AIDS-Related Complex." New England Journal of Medicine, 1987; 317 (4): 185-91.

"[A study was conducted to test] the efficacy of oral azidothymidine (AZT) in 282 patients with AIDS manifested by Pneumocystis carinii pneumonia alone or with advanced AIDS-related complex. [A double-blind, placebo-controlled trial was performed.] Subjects were stratified according to numbers of T cells with CD4 surface markers and were randomly assigned to receive either 250 mg of AZT or a placebo by mouth every 4 hours for 24 weeks. A total of 145 subjects received AZT, and 137 received the placebo. The study was terminated early because of a significant difference in mortality between the AZT and placebo recipients. Nineteen placebo recipients and 1 AZT recipient died during the study. Opportunistic infections developed in 45 subjects receiving the placebo, compared with 24 receiving AZT. The baseline Karnofsky performance score and weight increased statistically significantly among AZT recipients. A statistically significant increase in the number of CD4 cells was noted in subjects receiving AZT. After 12 weeks, the number of CD4 cells declined to pretreatment values among AZT recipients with AIDS but not among those with AIDS-related complex. Skin-test anergy was partly reversed in 29 percent of subjects receiving AZT, compared with 9 percent of those receiving the placebo. The data demonstrate that AZT. . . can decrease mortality and. . . opportunistic infections in a selected group of subjects with AIDS or AIDS-related complex, at least [during] the 8 to 24 weeks. . . of this study."

63. Lane, H.C., H. Masur, E.P. Gelmann et al., "Therapeutic Approaches to Patients with AIDS." Cancer Research, 1985; 45 (9 supplement): 4674s-4676s.

"The immune systems of patients with AIDS are characterized by a profound defect in the number and function of helper/inducer T-lymphocytes, particularly at the level of soluble antigen recognition. [Because of] this selective yet profound defect in the immune system, these patients are prone to recurrent, severe opportunistic infections and Kaposi's sarcoma. While therapies exist for some of these complications of AIDS, no effective therapies exist for the underlying immune defect of the syndrome. Reviewed are some recent attempts at immunologic reconstitution in AIDS patients, using either whole scale immune reconstitution through use of lymphocyte transfers and bone marrow transplantation or enhancement of the remaining immune systems with the T-cell-derived lymphokines interleukin-2 or immune gamma-interferon. Recent advances in the therapy of Pneumocystis carinii pneumonia and disseminated cytomegalovirus disease are discussed."

64. Norman, C., "AIDS Therapy: New Push for Clinical Trials." Science, December 20, 1985; 230 (4732): 1355-58.

Federal attempts at finding an effective drug therapy against AIDS are finally beginning to escalate. The task is a formidable challenge. The virus's complex life cycle gives rise to difficulties. For one thing, the AIDS virus becomes part of the cell it infects, and the virus infects the brain. Also, the patient's immune system will already have been destroyed if drugs are not administered until the late stages of the disease. It is likely that, when useful therapy is found, it will have to be administered for life. Limited clinical trials are being performed on at least four compounds in the United States: suramin, azidothymidine (AZT), ribavirin, and HPA-23. Other antiviral agents undergoing laboratory testing are Foscarnet, Al 721, and ansamycin. Work is also being attempted with bone marrow transplants along with antiviral therapy. No pharmaceutical "magic bullet" is expected.

65. Staver, S., "Drug Approval Brings Hope: M.D., Patients Optimistic over Retrovir." American Medical News, June 12, 1987.

This paper describes the experiences of Dr. William F. Owen, Jr., in prescribing Retrovir (zidovudine; also known as azidothymidine, or AZT) for some of his patients. The physician holds 90-minute patient meetings to discuss the drug. One man was diagnosed with lymphocytic interstitial pneumonitis (LIP), later with AIDS. He had developed esophageal candidiasis and encephalopathy and is severely depressed. An ARC patient has had dramatic swelling of his parotid gland; his T-4 helper cells are profoundly depleted. Both men were put on Retrovir, and their conditions improved. Another patient, however, has developed a painful rash all along his leg. Diagnosed with ARC two years ago, he does not have a severely enough depleted T-4 helper cell count to be eligible for Retrovir treatment, even though Dr. Owen suspects it might help him. His condition did improve, however, with acyclovir.

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73. Hilts, P.J., "FDA Probes Firm's Tests of Potential AIDS Drug." Washington Post, May 29, 1987.

74. Kennedy, T.E., "The AZTs of AIDS Research" [Letter]. Wall Street Journal, May 26, 1987.

75. Schmeck, H.M. Jr., "AIDS Drugs Offer Hope But Cure Remains Distant." New York Times, March 17, 1987.

76. Staff, "Claims for AIDS Drug Unfounded." FDA Consumer, May 1986; 20 (4): 3.

77. Staff, "Experimental Drugs for the Dying" [Editorial]. Washington Post, May 23, 1987.

78. Sullivan, R., "New York Granted Federal Money for AIDS Drug." New York Times, July 21, 1987.

EPIDEMIOLOGY

79. Bakeman, R., J.R. Lumb, R.E. Jackson et al., "AIDS Risk-Group Profiles in Whites and Members of Minority Groups" [Letter]. New England Journal of Medicine, July 17, 1986; 315 (3): 191-2.

This letter to the editor describes AIDS risk group profiles based on tallies provided by the Centers for Disease Control. "Among those who have contracted AIDS, 32 percent of the blacks (1490) and 78 percent of the whites (8915) were homosexual; 13 percent of the blacks (626) and 11 percent of the whites (1210) were bisexual; and 43 percent of the blacks (1983) and 14 percent of the whites (1563) were users of intravenous needles. . . .[It is not well known] that 50 percent of the blacks who have contracted AIDS are heterosexual; that 13 percent of the blacks who have contracted AIDS are bisexual; that 52 percent of the women and 60 percent of the children with AIDS are black; or that blacks account for 25 percent of all AIDS cases." It is suggested that this information become widely known and "that effective educational programs for prevention of AIDS be implemented in minority communities."

80. Baker, J.L., G.D. Kelen, K.T. Sivertson et al., "Unsuspected Human Immunodeficiency Virus in Critically Ill Emergency Patients." Journal of the American Medical Association, May 15, 1987; 257 (19): 2609-11.

"To determine the prevalence of unsuspected human immunodeficiency virus (HIV) infection in critically ill emergency patients. . . the anonymous serum samples of 203 critically ill or severely injured patients with no history of HIV infection [were examined. It was] found that six (3 percent) were seropositive for HIV antibody by both enzyme-linked immunoassay and Western blot analysis. All seropositives were trauma victims between the ages of 25 and 34 years, representing 16 percent of the trauma patients in that age group (n=37). All seropositives were actively bleeding, and all required multiple invasive procedures. History of intravenous drug abuse was not discriminating in identifying potential seropositives. [It was concluded] that infection-control precautions are indicated for both emergency department personnel and prehospital care providers (such as paramedics, police officers, and fire fighters) when caring for bleeding patients, whether or not previous suspicion of HIV infection exists."

81. Chamberland, M.E., J.R. Allen, J.M. Monroe et al., "Acquired Immunodeficiency Syndrome in New York City: Evaluation of an Active Surveillance System." Journal of the American Medical Association, July 19, 1985; 254 (3): 383-87.

"In January 1983, the New York City Department of Health initiated an active surveillance program for AIDS in 19 hospitals and a modified-active surveillance program in. . . 69 hospitals. . . Hospital laboratory and autopsy records in 12 active surveillance hospitals and 3 modified-active surveillance hospitals [were reviewed] 6 months later. Patients who had opportunistic diseases characteristic of AIDS diagnosed in 1982 . . . and 1983 . . . were matched against health department AIDS surveillance reports. For the 16 months evaluated, 96 percent of patients identified with AIDS in the 12 active surveillance hospitals and 100 percent of those in the three modified-active surveillance hospitals had been reported to the health department. The delay between diagnosing a case and reporting it to the health department significantly decreased between 1981 and the first six months of 1983 in all hospitals. [It was concluded] that the current surveillance program for AIDS in New York City is effective and that case reporting is sufficiently complete for accurate analysis of disease trends."

82. Clarke, J.A., "HIV Transmission and Skin Grafts" [Letter]. The Lancet, April 25, 1987: 983.

This very brief letter describes a case in which a weakly positive antibody test to human immunodeficiency virus (HIV) developed in a patient who had received allograft skin from a donor who was later found to have antibodies to HIV. Unfortunately, the skin had been used before the serological result was available. It is suggested that the transfer of HIV in a skin graft should prompt reevaluation of the long-established practice of using sheets of allograft until autograft cover can be achieved.

83. Curran, J.W., W.M. Morgan, A.M. Hardy et al., "The Epidemiology of AIDS: Current Status and Future Prospects." Science, September 27, 1985; 229 (4720): 1352-57.

"The reported incidence of AIDS continues to increase in countries throughout the world. On the basis of a polynomial model for extrapolation, the cumulative number of cases diagnosed and reported since 1981 in the United States is expected to double during the next year with over 12,000 additional cases projected to be diagnosed by July 1986. The annual incidence rates for single men . . . in Manhattan and San Francisco, intravenous drug users in New York City and New Jersey, and persons with hemophilia A ranged from 261 to 350 per 100,000 population during 1984. For single men aged 25 to 44 years in Manhattan and San Francisco, AIDS was the leading cause of premature mortality in 1984. . . .Infection with HTLV-III/LAV is considerably more common than reported AIDS in high-risk populations and can persist for at least several years, so the presence of a specific antibody should be considered presumptive evidence of current infection. . . .Most HTLV-III/LAV infections occur through sexual transmission, use of contaminated needles, and as a result of infected mothers passing the virus to newborns. . . .[It is suggested] that widespread community efforts are needed to minimize transmission."

Epidemiology

84. Darrow, W.W., D.F. Echenberg, H.W. Jaffe *et al.*, "Risk Factors for Human Immunodeficiency Virus (HIV) Infections in Homosexual Men." *American Journal of Public Health*, April 1987; 77 (4): 479-83.

"To clarify risk factors for infection with the human immunodeficiency virus (HIV) . . . 785 homosexual men who had participated in studies of hepatitis B in San Francisco in 1978-80 [were selected at random] for a follow-up study of the acquired immunodeficiency syndrome (AIDS). Although most had not been contacted in over 5 years, 492 (63 percent) were located and enrolled. The 240 (67 percent) who had developed antibodies to HIV, as measured by an enzyme-linked immunosorbent assay (ELISA), were compared with 119 who had remained seronegative. In multivariate analyses, receptive anal intercourse with ejaculation by nonsteady sexual partners, many sexual partners per month, and other indicators of high levels of sexual activity [were] highly associated with seroconversions. None of the sexual practices that [were] studied appeared to offer protection against HIV infection."

85. Deuchar, N., "AIDS in New York City with Particular Reference to the Psychosocial Aspects." *British Journal of Psychiatry*, 1984; 145: 612-19.

The psychosocial, psychiatric, and therapeutic problems facing AIDS patients, particularly those living in New York City, are discussed. The prognosis for AIDS is grim (41 percent fatality rate for reported cases in the United States rising in the months following diagnosis to over 90 percent in patients who have had the disease for 2 years) and the psychological impacts for individuals at real risk, including homosexual men, intravenous drug abusers, and Haitians, should not be underestimated. Additionally, fear and panic about AIDS appear to be spreading through society at a rate greater than the disease itself with effects on the patients themselves that are obvious and devastating. In general, the concept of sexuality for homosexual men has been seriously challenged and AIDS panic is showing most often in individuals whose personalities are generally characterized by obsessive and paranoid features. Superimposed on a complex set of reactions to the disease are emotional crises arising out of patients' mounting isolation and the financial toll of therapy. Comprehensive treatment regimes must start with the education of the general public, hospital staff, and involve treatment not only of the patient, his family and friends, but also of members of risk groups suffering from the AIDS panic.

86. DeVita, V., Jr., S. Hellman and S.A. Rosenberg, eds., *AIDS: Etiology, Diagnosis, Treatment, and Prevention*. Philadelphia: J.B. Lippincott, 1985.

A comprehensive source of information on all aspects of AIDS, written by clinicians and scientists who have made the central contributions in this field [is presented]. The first part of the book contains a discussion of the epidemiology of AIDS and a detailed discussion of recent developments concerning identification of the viral etiology of this disease. The underlying immunological defects as well as the pathologic findings in AIDS patients and patients with AIDS-related complexes are dealt with in detail. The second part of the book deals with clinical findings in AIDS patients, including the infectious complications and malignant tumors that often accompany the disease. Finally, the psychosocial aspects of AIDS are discussed, as well as the implications of recent findings for hospital management, patient and equipment isolation, and other treatment-related issues."

87. Dilley, J., H.N. Ochitill, M. Perl *et al*., "Findings in Psychiatric Consultations with Patients with Acquired Immune Deficiency Syndrome." *American Journal of Psychiatry,* 1985; 142 (1): 82-86.

"[Out of 40 AIDS] patients admitted to the wards of a large city hospital, 13 were seen by the staff of a psychiatric consultation service. Of these, 11 were gay men and 2 were bisexual men. . . . Recurrent psychological themes of the 13 patients were: dealing with a life-threatening illness, uncertainty about the implications of an AIDS diagnosis, social isolation, and guilt over their previous life-style . . . [The] findings suggest a number of recommendations for the primary care staff and psychiatric consultant including: (1) health care providers should review their attitudes and feelings in several areas. . . .(2) care providers need to openly recognize the frustrations associated with treatment of the disorder. . . .(3) the psychiatrist needs to review personal doubts [and should be clear about the nature of his or her involvement with the patient]. . . .(4) the psychiatrist should be particularly thorough and adept in the assessment of mood and cognitive disturbances. . . .(5) patients with more severe disturbance require direct ongoing intervention. . . .(6) lay volunteers can be very helpful. . . .[and] (7) there is . . . no room in the care of the AIDS patient for moral posturing."

88. Dolan, M.P., J.L Black, H.A. Deford *et al*., "Characteristics of Drug Abusers that Discriminate Needle-Sharers." *Public Health Reports*, July-August 1987; 102 (4): 395-98.

"To identify variables that discriminate needle-sharing among drug abusers, 224 male drug abusers were studied. They had been admitted to a 30-day inpatient drug treatment program over a 19-month period. . . .The variables examined were divided into three categories: demographic . . . personality . . . and drug use patterns. . . .Compared with other drug abusers, needle-sharers used more multiple drugs, were more likely to use a "shooting gallery," and had more problems related to drug use. No demographic or personality variables discriminated needle-sharers from nonsharers. The data [suggest] that needle-sharing is wide-spread in the drug culture. Needle-sharing was not confined to a particular racial group, educational level, or personality type. These findings can be used to structure education programs about AIDS for drug abusers. Drug treatment programs appear to provide an important opportunity to educate drug abusers about AIDS and related health issues associated with needle-sharing."

89. Fischl, M.A., G.M. Dickinson, G.B. Scott et al., "Evaluation of Heterosexual Partners, Children, and Household Contacts of Adults With AIDS." Journal of the American Medical Association, February 6, 1987; 257 (5): 640-44.

"Forty-five adults with AIDS and their 45 spouses, 109 children, and 29 household contacts were studied for evidence of heterosexual, perinatal, and household spread of human T-cell lymphotropic virus type III (HTLV-III) infection. Of the 45 spouses enrolled, 26 (58 percent) had antibody to HTLV-III, including 12 (71 percent) of 17 male spouses and 14 (50 percent) of 28 female spouses. Of the 12 seropositive male spouses, 9 were seropositive at enrollment and 3 had seroconversion. Of the 14 seropositive female spouses, 4 were seropositive at enrollment and 10 seroconverted. Lack of barrier contraceptive use and oral sex were associated with seroconversion. Of the 109 children enrolled, 15 had AIDS or an AIDS-related illness, 2 had evidence of passive transfer of maternal antibodies, and 2 had HTLV-III infection acquired outside the household. None of the 90 seronegative children seroconverted. Of 29 household contacts studied, none developed antibody to HTLV-III."

90. Fleming, D.W., S.L. Cochi, R.S. Steece et al., "Acquired Immunodeficiency Syndrome in Low-Incidence Areas: How Safe Is Unsafe Sex?" Journal of the American Medical Association, August 14, 1987; 258 (6): 785-87.

"Serum specimens from a cohort of persons who attended sexually transmitted disease clinics in New Mexico during a 2-month period were tested for human immunodeficiency virus (HIV) antibody. Twenty-seven (2.0 percent) of 1374 serum specimens had repeatedly low-positive reactions by enzyme-linked immunosorbent assay testing, and 22 (1.6 percent) had repeatedly high-positive reactions. All sera (sufficient for testing by Western blot) with low-positive reactions gave negative results and all sera (sufficient for testing by Western blot) with high-positive reactions gave positive results. All persons whose serum had high-positive reactions were male. Most (86 percent) had been seen at the only urban sexually-transmitted disease clinic in New Mexico, and most (72 percent) were openly gay or bisexual. Of all gay and bisexual men evaluated, 14 percent (16/112) had high-positive reactions. The relatively high rate of HIV seropositivity among gay men with other sexually transmitted diseases indicates that transmission of AIDS is continuing in this low-incidence area and documents the need for testing and counseling programs in sexually transmitted disease clinics."

91. Fuchs, D., A. Hausen, P. Hengster et al., "In Vivo Activation of CD4+ Cells in AIDS." Science, January 16, 1987; 235: 356.

This technical commentary proposes an alternative explanation for the reduced ability of lymphocytes from patients with AIDS and AIDS-related syndrome (ARC) to react to antigens or to produce IFN-gamma in vitro. This alternative explanation is based on data from studies of patients with systemic lupus erythematosus. There is an inverse correlation between the concentration of serum IFN and the production of IFN by lymphocytes in culture. The decreased production of IFN-gamma in patients with AIDS and ARC appears to be restricted to studies in vitro and thus does not indicate defective IFN-gamma production in vivo. Additional data support the view that "the activation of T cells is important as a cofactor for HIV expression not only in vitro but also in vivo, and that the decreased production of IFN-gamma from cells from AIDS and ARC patients in vitro results from the continuous endogenous exposure to IFN in vivo."

92. Gallo, R.C., S.Z. Salahuddin, M. Popovic et al., "Frequent Detection and Isolation of Cytopathic Retroviruses (HTLV-III) from Patients with AIDS and at Risk for AIDS." Science, May 4, 1984; 224 (4648): 500-03.

"Peripheral blood lymphocytes from patients with the acquired immunodeficiency syndrome (AIDS) or with signs or symptoms that frequently precede AIDS (pre-AIDS) were grown in vitro with added T-cell growth factor and assayed for the expression and release of human T-lymphotropic retroviruses (HTLV). Retroviruses belonging to the HTLV family and collectively designated HTLV-III were isolated from a total of 48 subjects, including 18 of 21 patients with pre-AIDS, 3 of 4 clinically normal mothers of juveniles with AIDS, 26 of 72 adult and juvenile patients with AIDS, and 1 of 22 normal male homosexual subjects. No HTLV-III was detected in or isolated from 115 normal heterosexual subjects. The number of HTLV-III isolates reported here underestimates the true prevalence of the virus, since many specimens were received in unsatisfactory condition. Other data show that serum samples from a high proportion of AIDS patients contain antibodies to HTLV-III. That these new isolates are members of the HTLV family but differ from the previous isolates known as HTLV-I and HTLV-II is indicated by their morphological, biological, and immunological characteristics. These results and those reported elsewhere suggest that HTLV-III may be the primary cause of AIDS."

93. Goedert, J.J., R.J. Biggar, M. Melbye et al., "Effect of T4 Count and Cofactors on the Incidence of AIDS in Homosexual Men Infected With Human Immunodeficiency Virus." Journal of the American Medical Association, January 16, 1987; 257 (3): 331-34.

". . . [P]otential markers and cofactors for AIDS [were prospectively evaluated] in 86 homosexual men who were seropositive for human immunodeficiency virus antibodies. During 3 years of follow-up, 19 men developed AIDS. Risk of AIDS was clearly predicted by the total number of circulating OKT4-positive lymphocytes (T4 count) at enrollment, while the corresponding T8 count was unrelated to subsequent AIDS development. Subjects in Manhattan had a higher risk of Kaposi's sarcoma than did subjects in Washington, DC, and the risk of AIDS tended to increase with numerous homosexual partners. Several of 40 potential cofactors defined ex post facto, including receptive fellatio, enemas, methaqualone use, and high levels of antibody to hepatitis B surface antigen, appeared to be associated with Kaposi's sarcoma but not with Pneumocystis pneumonia. [The] data suggest that potent cofactors for Pneumocystis pneumonia were not prominent, pointing to the need for effective drug therapies, particularly to reduce the high AIDS risk of persons with human immunodeficiency virus infectionand low T4 counts."

94. Goedert, J.J., R.J. Biggar, S.H. Weiss et al., "Three-Year Incidence of AIDS in Five Cohorts of HTLV-III-Infected Risk Group Members." Science, February 28, 1986; 231 (4741): 992-95.

"The incidence of AIDS among persons infected with human T-lymphotropic virus type III (HTLV-III) was evaluated prospectively among 725 persons who were at high risk of AIDS and had enrolled before October 1982 in cohort studies of homosexual men, parenteral drug users, and hemophiliacs. A total of 276 (38.1 percent) of the subjects were either HTLV-III seropositive at enrollment or developed HTLV-III antibodies subsequently. AIDS had developed in 28 (10.1 percent) of the seropositive subjects before August 1985. By actuarial survival calculations, the 3-year incidence of AIDS among all HTLV-III seropositive subjects was 34.2 percent in the cohort of homosexual men in Manhattan, New York, and 14.9 percent (range 8.0 to 17.2 percent) in the 4 other cohorts. Out of 117 subjects followed for a mean of 31 months after documented seroconversion, 5 (all hemophiliacs) developed AIDS 28 to 62 months after the estimated date of seroconversion, supporting the hypothesis that there is a long latency between acquisition of viral infection and the development of clinical AIDS. This long latency could account for the significantly higher AIDS incidence in the New York cohort compared with other cohorts if the virus entered the New York homosexual population before it entered the populations from which the other cohorts were drawn."

95. Gold, J.W.M. and D. Armstrong, "Infectious Complications of the Acquired Immune Deficiency Syndrome." Annals of the New York Academy of Sciences, 1984; 437: 383-93.

The infectious complications of AIDS that involve the respiratory system, central nervous system, and gastrointestinal tract are discussed. Some infections caused by specific organisms in AIDS patients have such unique features that they have been given individual attention. Symptoms and treatment of pneumonia caused by Pneumocystis carinii (PCP) and of mycobacterial, cytomegalovirus, and herpes simplex infections are presented. The cause of AIDS is unknown and in the absence of a specific etiologic agent or diagnostic test, a case of AIDS can only be recognized when complications of the immune deficiency, such as infection or Kaposi's sarcoma occur. "Defective T-cell function is the principal immunologic defect; there are also defects, however, in B-cell function that may have some clinical significance. It has not yet been possible to reverse the immunologic deficiency, and this failure has been the principal prognostic factor in this illness. A number of the infectious complications of AIDS, however, can be diagnosed and successfully treated."

96. Hardy, A.M., J.R. Allen, W.M. Morgan et al., "The Incidence Rate of Acquired Immune Deficiency Syndrome in Selected Populations." Journal of the American Medical Association, 1985; 253: 215-20.

"Population figures were obtained and incidence rates of AIDS for the 12 months from June 1, 1983 to May 31, 1984 were estimated for the following groups: single (never-married) men aged 15 years or older, intravenous (IV) drug users, Haitians living in the United States, persons with hemophilia A and B, female sexual contacts of male IV drug users, and blood transfusion recipients. Single men in San Francisco and Manhattan, IV drug users in New York City and New Jersey, hemophilia A patients, and recent Haitian entrants had the highest rates of disease (82.0 to 268.9 per 100,000). Male IV drug users and male Haitians were two to four times as likely to experience development of AIDS as were females in each group. Persons with hemophilia A had six times the incidence rate of AIDS as did those with hemophilia B. . . . Although blood transfusion recipients and female sexual contacts of male IV drug users had much lower average yearly rates than did persons in the four other groups (0.4 to 9.4 per 100,000), they still had a higher incidence rate of AIDS than did persons not belonging to any of these groups (0.1 per 100,000)."

97. Harnish, D.G., O. Hammerberg, I.R. Walker et al., "Early Detection of HIV Infection in a Newborn" [Letter]. New England Journal of Medicine, January 29, 1987; 316 (5): 272-73.

The use of in situ hybridization as a relatively rapid, accurate technique to detect human immunodeficiency virus (HIV) infection early in a newborn is reported in this letter to the editor. A serum sample from a 20-year-old man with mild hemophilia A was positive for antibody to HIV. Approximately a year later, the patient's wife (in the 36th week of pregnancy) was found to have antibody to HIV. After delivery, the baby was well with no evidence of infection. Studies were performed on heparinized venous blood taken from both the mother and infant 24 hours after birth. Seven and 14 days after initiation of culture, cells from both the mother and baby were examined for the T4/T8 ratio and the presence of HIV by in situ hybridization using a cDNA probe to HIV. Hybridization with labeled HIV-specific cDNA demonstrated that both the mother and infant were positive. Counts indicated that 3.4 percent of maternal lymphocytes and 3.8 percent of infant lymphocytes were positive for HIV after 1 week of culture; after 2 weeks less than 1 percent of maternal lymphocytes were HIV positive, whereas 3.8 percent of cultured cells from the baby were still positive. The results suggest that short-term expansion (by phytohemagglutinin and interleukin-2) of T4+ cells in vitro may enhance the ability to detect cells infected with virus. The results also demonstrate that in situ hybridization can be used effectively for early detection of HIV infection in newborns and should be a useful method to determine the risk of mother-child transmission.

98. Hopkins, D.R., "Key Epidemiologic Questions About AIDS and Infection with HTLV-III/LAV." Public Health Reports, May-June 1986; 101 (3): 234-37.

"The Epidemiology and Prevention Workgroup of the Public Health Service (PHS) Executive Task Force on AIDS developed a list of key epidemiologic questions about AIDS and HTLV-III/LAV infection as part of the follow-up to the "Public Health Service Plan for the Prevention and Control of Acquired Immune Deficiency Syndrome." The workgroup's purpose in developing the list was to provide a framework to help ensure that studies designed to answer the most important such questions were completed, under way, or initiated as soon as possible." General areas of consideration, each with from 4 to 20 specific related questions, include: (1) surveillance and prevalence; (2) natural history of infection; (3) modes of transmission; (4) effectiveness of control and prevention measures; and (5) directly related laboratory projects.

99. Institute for Health Policy Studies (School of Medicine, University of California, San Francisco), AIDS Activities, March 1987.

Past and present activities of the Institute for Health Policy Studies (IHPS) are briefly described. These studies have focused on policy issues, including the response of the federal government, state and local governments, and the private sector to the AIDS epidemic; the organization, management, and financing of community-based services; and costs of services. The Institute's AIDS activities currently include providing direction and technical assistance for the AIDS Health Services Program; providing information, education and training, technical assistance, and policy research and analysis related to AIDS service delivery systems and AIDS prevention and education; participating in a multidisciplinary Substance Abuse and Mental Health in AIDS Center; conducting a 2-year AIDS Cost of Care Study in California; and completing a prospective study of costs of care in San Francisco. Areas of past research and analysis include the federal response to the AIDS epidemic; resources for AIDS patient care and research; economic and medical care costs of AIDS; AIDS and health policy; and the personal and social consequences of AIDS antibody testing and notification.

100. Institute for Health Policy Studies (School of Medicine, University of California, San Francisco), "AIDS." Institute for Health Policy Studies Report, Spring 1987; 7 (1): 1-4.

The current activities of the faculty and staff of the Institute for Health Policy Studies (IHPS) are described, including the provision of direction and technical assistance for the AIDS Health Services Program, a $17.2 million national demonstration program; the provision of information, education, training, technical assistance, policy research, and analysis related to AIDS service delivery systems, AIDS prevention, and education through the AIDS Resource Program; the participation in a multidisciplinary Substance Abuse and Mental Health In AIDS Center newly established at the University of California, San Francisco (UCSF) and funded by a 5-year grant from the federal Alcohol, Drug Abuse and Mental Health Administration; and the conducting of a 2-year AIDS Cost of Care Study in California funded by the State Department of Health Services, Office of AIDS; as well as a study of costs of care in San Francisco funded by the university-wide Task Force on AIDS. The brief description of these activities is followed by a description of the completed Institute study of community-based services for AIDS patients in San Francisco.

101. Iversen, O. and S. Engen, "Epidemiology of AIDS -- Statistical Analyses." Journal of Epidemiology and Community Health, 1986; 41: 55-58.

"Some central questions concerning the epidemiology of AIDS are addressed by statistical analyses. Applying standard maximum likelihood theory to reported cases of transfusion-associated AIDS in the United States, the mean and standard deviations of incubation time for AIDS are estimated to be about 60 and 19 months, respectively. If these parameters are applied to the data from the San Francisco Centers for Disease Control (CDC) cohort study, we find a good correspondence between estimated and reported cases of AIDS when the probability factor p is 0.27 -- meaning that about 27 percent of those infected with HIV are expected to develop AIDS during a period of 8 to 10 years. Application of the incubation time model and the probability factor p to the data on transfusion-associated AIDS makes it possible to estimate the number of transfusion-associated infections with HIV from 1978 to 1984. These estimates give an exponential increase in the number of cases, with a relative increase of 2.74 each year. . . .If the number of persons infected with HIV increases by a factor of 2.74 each years, this means that the number of HIV-infected persons doubles every 8.2 months."

102. Johnson, J.P. and P. Nair, "Early Diagnosis of HIV Infection in the Neonate" [Letter]. New England Journal of Medicine, January 29, 1987; 316 (5): 273-74.

This letter to the editor states that the prevalence of AIDS among children in the United States has risen dramatically over the past two years and that most of these children acquired HIV from an infected mother during the perinatal period. Unfortunately, until reliable assays for detection of viral nucleic acids or replication are available, children born to infected women must be regarded as infected. Because there is currently no simple method for identifying infants infected with HIV, it is recommended that all children born to HIV-infected women should be screened for antibody against HIV after the neonatal period. The authors have documented the early onset of synthesis of IgG antibody in a child born to an HIV-infected mother.

103. Johnson, J.R., "Heterosexual Transmission of Acquired Immunodeficiency Syndrome" [Letter]. Journal of the American Medical Association, May 1, 1987; 257 (17): 2288-89.

This letter to the editor discusses the results of a previous study on the transmission of AIDS in sexually active heterosexual couples (Fischl, M.A. et al.: Evaluation of heterosexual partners, children, and household contacts of adults with AIDS. JAMA 1987;257:640-644), and suggests that the authors of the study should have emphasized the additional conclusion, which is of major potential significance to heterosexual couples, that there is an observed association between seropositivity for HIV in men and a history of other heterosexual partners. It is further suggested that this information, if properly presented and publicized, could help teach an important lesson and encourage much-needed changes in behavior.

In reply, M.A. Fischl et al. state that the major purpose of their prospective study was to evaluate the efficiency of and the potential mechanisms associated with the heterosexual transmission of HIV among spouses and monogamous heterosexual couples, as well as to evaluate any potential household transmission of HIV. However, it is agreed that multiple heterosexual partners, especially sexual contact with female prostitutes, may represent an important risk factor for the heterosexual transmission of HIV.

104. Jones, G.H., C.L. Kelly and J.A. Davies, "HIV and the Onset of Schizophrenia" [Letter]. The Lancet, April 25, 1987: 982.

This letter to the editor presents the case history of a 27-year-old man known to have antibodies to human immunodeficiency virus (HIV). The patient was admitted to the hospital with a suspected diagnosis of Pneumocystis carinii, and within days his mental state began to deteriorate, leading to a presumptive diagnosis of acute schizophrenia. The authors question a link between the man's acute schizophrenic illness and his HIV carrier status, without symptoms of

AIDS, stating that HIV seems to be neurotropic, the central nervous system acting as a sanctuary for the virus. Neurological illness may develop before or in the absence of HIV-related immuno-deficiency, but it is contended that this is the first published report of a pure schizophrenic illness in an HIV seropositive man with a normal cognitive state and a normal CT scan.

105. Koplan, J.P., A.M. Hardy and J.R. Allen, "Epidemiology of the Acquired Immunodeficiency Syndrome in Intravenous Drug Abusers." Advances in Alcohol and Substance Abuse, Fall 1985-Winter 1986; 5 (1-2): 13-23.

The epidemiology of AIDS in intravenous (IV) drug users is described. "As of March 12, 1984, 3,694 cases of AIDS [with 1,601 deaths] have been reported to the Centers for Disease Control. Among the groups at increased risk for acquiring AIDS are IV drug users. Six hundred forty heterosexual IV drug users with AIDS . . . (17.3 percent of total cases) and 326 homosexual IV drug users with AIDS were reported (8.8 percent of total cases). This [review of the descriptive] epidemiology of AIDS in intravenous drug users [raises many unanswered questions, including questions relating to geographic spread, rate of spread, and disease patterns.]"

106. Kristal, A.R., "The Impact of the Acquired Immunodeficiency Syndrome on Patterns of Premature Death in New York City." Journal of the American Medical Association, May 2, 1986; 255 (17): 2306-10.

"This report examines the impact of AIDS on patterns of mortality among persons aged 15 to 64 years in New York City. The New York City AIDS surveillance registry was matched to the New York City vital statistics registry to identify deaths caused by AIDS. In 1984, the AIDS mortality rate per 100,000 persons aged 15 to 64 years was 42.2 for males and 5.3 for females. Analyzed by 5-year age groups, AIDS was among the five leading causes of death for males aged 25 to 54 years, and the leading cause of death for males aged 30 to 39 years. For females, AIDS was the fourth leading cause of death for women aged 25 to 29 years, and the second leading cause for women aged 30 to 34 years. . . .For both men and women in the highest-risk age group, 20 to 44 years, blacks and Hispanics had higher mortality rates than Asians or whites. [This] higher mortality is believed to be related to a higher prevalence of drug abuse in these populations and not to ethnicity per se."

107. Landesman, S.H., H.M. Ginzberg and S.H. Weiss, "The AIDS Epidemic." New England Journal of Medicine, February 21, 1985; 312 (8): 521-25.

This Special Report reviews the magnitude of HTLV-III exposure, the outcome of such exposure, the economic burden of HTLV-III-related disease, and the social, ethical, and public implications of this epidemic for the future. At present it is impossible to give an accurate figure for the total number of persons in this country who are positive for HTLV-III antibodies; on the basis of the date presented, it is estimated that the total is at least 400,000 persons, although the potential pool of people at increased risk of exposure to the virus is larger. It is suggested that it is not unreasonable to anticipate an increase during the next 2 decades in the number of long-term sequelae among persons currently exposed to HTLV-III. The average direct lifetime hospital cost for the care of such patients is calculated to be $42,000, and it is estimated that AIDS will cost society more than half a billion dollars during the following calendar year. The anticipated widespread introduction of tests for HTLV-III antibodies has sparked controversy about the complex legal, medical, social, and ethical issues that would be raised.

108. Lang, W., R.E. Anderson, H. Perkins et al., "Clinical, Immunologic, and Serologic Findings in Men at Risk for Acquired Immunodeficiency Syndrome: The San Francisco Men's Health Study." Journal of the American Medical Association, January 16, 1987; 257 (3): 326-30.

"Forty-nine percent of homosexual/bisexual men were positive for antibody to the human immunodeficiency virus (HIV) in a population-based probability sample of 1034 single men recruited from San Francisco. All heterosexual men were negative. Among seropositive men, marked lymphadenopathy was present in 29 percent and 16 percent had at least two other symptoms or signs suggestive of HIV infection. However, lymphadenopathy alone failed to indicate severity of immune impairment. The occurrence of two or more clinical signs and symptoms, except for marked lymphadenopathy, correlated with HIV infection, diminished skin test reactivity, and reduction in Leu 3a T cells. Twenty-nine percent of seropositive men had fewer than 400 absolute Leu 3a T helper cells per microliter. Seronegative homosexual/bisexual men did not differ from heterosexual men in any clinical or laboratory variables except for increased numbers of suppressor Leu 2a T suppressor cells per microliter."

109. Laurence, J., "The Immune System in AIDS." Scientific American, December 1985; 253 (6): 84-93.

The mechanisms by which AIDS affects the immune system are described. It is suggested that the collapse of the immune defenses in AIDS victims stems largely from a reduction in the number and a change in the function of the T4 lymphocytes, "one of the many distinct kinds of cells that make up the immune system." An invading virus ordinarily evokes a complex interplay of the cellular elements of the immune system. The AIDS virus is not unique in its ability to avoid destruction by the immune system, and it does so by preemptively destroying the immune system. In the case of the AIDS retrovirus, immunosuppression results from viral infection of T4 lymphocytes, which orchestrate much of the immune response. It has also been suggested that the virus elicits the production of anti-T4-cell antibodies. Another hypothesis is that a soluble suppressor factor originates in the envelope of the AIDS virus.

110. Layon, J., M. Warzynski and A. Idris, "Acquired Immunodeficiency Syndrome in the United States: A Selective Review." Critical Care Medicine, September 1986; 14 (9): 819-27.

"The acquired immunodeficiency syndrome (AIDS) epidemic shows no sign of waning. Recent calculations suggest that several hundred thousand asymptomatic people have been infected with the putative AIDS agent HTLV-III/LAV. This review includes an analysis of . . . means of preventing transmission of the syndrome and a discussion of the psychosocial and ethical impacts of the disorder. Also summarized are epidemiologic and clinical parameters of AIDS in the United States [with a description of its etiology, immunology, clinical presentation, and therapy]."

111. May, R.M. and R.M. Anderson, "Transmission Dynamics of HIV Infection." Nature, March 12, 1987; 326 (6109): 137-42.

"Simple mathematical models of the transmission dynamics of human immunodeficiency virus help to clarify some of the essential relations between epidemiological factors, such as distributed incubation periods and heterogeneity in sexual activity, and the overall pattern of the AIDS epidemic. They also help to identify what kinds of epidemiological data are needed to make predictions of future trends. . . .As such data become available, the models can be made more detailed and realistic. For public health planning, the dominant unknown is f, the fraction infected who will eventually develop AIDS . . . .The duration of infectiousness and the way this duration is distributed among different infectives is also relevant to estimates of R, [the basic reproductive rate of the infection]. . . . More generally, there is need for more studies that combine information about the epidemiological history of individuals with information about their sexual habits. . . .From present knowledge, it is not possible to assess whether R', [the basic reproductive rate for heterosexual transmission of HIV], is greater or less than unity in developed countries, and it is thus not possible to say whether HIV infections could spread epidemically by purely heterosexual transmission."

112. McAuliffe, K., "AIDS: At the Dawn of Fear." U.S. News & World Report, January 12, 1987, 102 (1): 60-70.

Up to 10 million people worldwide now carry the AIDS virus and are potential victims. About 80 nations have reported cases, but the data are sketchy and dubious except in the United States and a few other Western countries. Two of every 3 new AIDS cases involve homosexuals, but the disease is closing in on drug users and on heterosexuals, who by 1991 may account for 1 in 11 new cases. Official projections may be much too low, and the United States has moved uncertainly toward recognizing the threat and dealing with it. For fiscal 1988, the administration proposed to spend $534 million, which is far less than many experts recommend. AIDS has now been reported in all 50 states, but it is agreed that congested urban areas remain the greatest threat. The government's sluggishness in recognizing and dealing with AIDS has one major exception: medical investigators at federal research centers who have chased any scrap of information that might help them. The desperate need for education reflects the medical consensus that a means of arresting AIDS will come no sooner than 5 or 10 years. Sources of information and help, with names, addresses, and telephone numbers, are included.

113. Moss, A.R., G. McCallum, P.A. Volberding et al., "Mortality Associated with Mode of Presentation in AIDS." Journal of the National Cancer Institute, 1984; 73(6): 1281-84.

"A population-based survival study was done for all cases of AIDS diagnosed in the city of San Francisco through May 1983. Follow-up was obtained for 165 of 173 diagnosed cases. Median survival among 75 patients presenting with Kaposi's sarcoma alone was 21 months. Median survival among 90 patients presenting with opportunistic infections, primarily Pneumocystis carinii pneumonia, was 9 months; survival at 21 months was 0. Survival among patients presenting with both Kaposi's sarcoma and opportunistic infections was not statistically different from survival among patients presenting with opportunistic infections only. When cases were divided into those diagnosed before and after May 1982, there was no significant improvement in survival from diagnosis in the more recently diagnosed cohort."

114. Moss, A.R., D. Osmond, P. Bacchetti et al., "Risk Factors for AIDS and HIV Seropositivity in Homosexual Men." American Journal of Epidemiology, June 1987; 125 (6): 1035-47.

". . . [C]ases of AIDS diagnosed in San Francisco, California, during 1983-84 [were compared] with human immunodeficiency virus (HIV) antibody-negative neighborhood and clinic controls with a goal of finding risk factors for clinical AIDS. . . .[A]ntibody-positive . . . [and] antibody-negative neighborhood and clinical controls [were compared] for risk factors for HIV infection. Odds ratios were 52.0 for AIDS and 7.8 for seropositivity for more than 100 sexual partners versus 0-5 partners when antibody-negative neighborhood controls were compared with cases and with antibody-positive neighborhood controls, respectively. Odds ratios were only 2.9 and 3.4 when antibody-negative clinic controls were compared with cases and with antibody-positive clinic controls, respectively. Odds ratios of 4.6-7.3 for rectal receptivity with most or all partners versus none or 1 partner were statistically significant, independent of the number of partners. Douching before sex was independently associated with odds ratios of 2.2-2.8. There was no evidence for oral-genital, oral-anal, or other sexual transmission of AIDS. In multivariate analysis, independent odds ratios for prior syphilis and for prior giardiasis were statistically significant or marginally significant in all comparisons."

115. Mullin, G.E., A.L. Sheppell and L.F. Mayer, "Infection with HTLV-I and HTLV-III in T8 Lymphoproliferative Disease" [Letter]. New England Journal of Medicine, May 21, 1987; 316 (21): 1343.

This letter to the editor describes two recent reports on concomitant infection with human T-cell lymphotropic virus types I and III (HTLV-I and HTLV-III) in which the order of infection is probably earlier infection with HTLV-I. The spread of HTLV-I to a population at risk in this population raises the possibility that the first virus acquired enhances the infectivity of the second. It is suggested that the level of suppressor-cell function before infection with HTLV-III may affect the expression of AIDS.

116. Norman, C., "AIDS Virology: A Battle on Many Fronts." Science, November 1, 1985; 230 (4725): 518-21.

Proof that a retrovirus causes AIDS put research on a new footing, but who should get the credit has become a matter of dispute. Robert C. Gallo of the National Cancer Institute and his many coworkers firmly implicated a new retrovirus as the cause of AIDS. Equally important, Gallo's work enabled large quantities of the virus to be grown for further studies, which led to mass production of a test to detect viral antibodies in human blood. The publication of Gallo's work also marked a turning point in a dispute between Gallo and Luc Montagnier of the Pasteur Institute in Paris over who should be given credit for discovering and identifying the cause of AIDS. The priority dispute has led to a battle between the Pasteur Institute and the U.S. government over patents governing the use of kits for testing blood donations, a patent fight involving millions of dollars a year in royalties.

117. Oleske, J., A. Minnefor, R. Cooper et al, "Immune Deficiency Syndrome Children." Journal of the American Medical Association, May 6, 1983; 249(17): 2345-49.

". . . [In this report], eight children from the Newark, New Jersey metropolitan area, born into families with recognized risks for AIDS [are described. A group of children with an otherwise unexplained immune deficiency syndrome and infections of the type found in adults with AIDS have been encountered.] These patients have had recurrent febrile illnesses, failure to thrive, hypergammaglobulinemia, and depressed cell-mediated immunity (CMI). Four of these children have died. . . . The present epidemic of AIDS was originally described in homosexual men and subsequently in intravenous drug abusers, Haitians, and hemophiliacs. Profound defects in CMI are associated with

Kaposi's sarcoma and a variety of serious opportunistic infections. . . .[The] present experience suggests that children living in high-risk households are susceptible to AIDS and that sexual contact, drug abuse, or exposure to blood products is not necessary for disease transmission."

118. Padian, N., L. Marquis, D.P. Francis et al., "Male-to-Female Transmission of Human Immunodeficiency Virus." Journal of the American Medical Association, August 14, 1987; 258 (6): 788-90.

"Ninety-seven female sexual partners of 93 men infected with human immunodeficiency virus were studied. All of the women had sexual contact within the year before their partner had been diagnosed as having AIDS or was found to have a positive reaction on the human immunodeficiency virus serologic test. Fifty-seven percent were the partners of bisexual men. Overall, 23 percent of the women were infected (95 percent confidence interval, 15 percent to 32 percent). The total number of exposures to the index case (sexual contacts with ejaculation) and the specific practice of anal intercourse, also with the infected partner, were associated with transmission. Neither condom use, total number of sexual partners since 1978, nor lifetime number of sexually transmitted diseases was associated with infection."

119. Peterman, T.A., D.P. Drotman and J.W. Curran, "Epidemiology of the Acquired Immunodeficiency Syndrome (AIDS)." Epidemiologic Reviews, 1985; 7:1-21.

This extensive review of the literature discusses in detail the epidemiology of AIDS, characterizing the routes of transmission of this virus and suggesting strategies for prevention. The identification of the retrovirus HTLV-III and the immunologic abnormalities resulting from infection with HTLV-III are discussed along with a presentation of the clinical manifestations of AIDS. Surveillance was initiated by requesting that physicians report any cases of Kaposi's sarcoma or P. carinii pneumonia to the Centers for Disease Control (CDC). This surveillance indicates an AIDS epidemic curve that clearly shows the number of cases is increasing rapidly. The surveillance system has also identified characteristic groups that are at increased risk for AIDS and has also facilitated epidemiologic studies, which have characterized risk factors within these groups and have increased our understanding of the transmission of AIDS. Epidemiology has contributed significantly toward understanding and providing recommendations to control the AIDS epidemic, and AIDS research has contributed to the field of epidemiology.

120. Polk, B.F., R. Fox, R. Brookmeyer et al., "Predictors of the Acquired Immunodeficiency Syndrome Developing in a Cohort of Seropositive Homosexual Men." New England Journal of Medicine, January 8, 1987; 316 (2): 61-66.

Factors associated with or predictive of subsequent AIDS in a large cohort of homosexual men who were seropositive at the time of enrollment in a longitudinal follow-up study were determined. "In a cohort of 1835 homosexual men who were seropositive for human immunodeficiency virus (HIV) on entry into a prospective study, AIDS developed in 59 during a median follow-up of 15 months. . . .In a multivariate analysis, a decreased number of T-helper lymphocytes, an increased number of T-suppressor lymphocytes, a low level of antibody to HIV, a high titer of cytomegalovirus antibody, and a history of sex with someone in whom AIDS developed were independently associated with subsequent AIDS. Separate analyses of risk factors for Kaposi's sarcoma and opportunistic infections failed to support previously reported associations between the use of nitrites or an elevated cytomegalovirus-antibody titer and Kaposi's sarcoma. [It is suggested that] these variables may be markers rather than determinants of disease progression. The results may be useful in counseling HIV-seropositive persons and in designing studies of clinical interventions."

121. Public Health Service, Centers for Disease Control, Facts About AIDS. Washington, D.C.: Department of Health and Human Services, Public Health Service, Spring 1987.

"This fact sheet describes, in question-and-answer form, accurate information about AIDS, the risk of contracting AIDS, the actions individuals can take to reduce spreading AIDS, and current research and related activities underway in the Public Health Service. . . .AIDS was first reported in the United States in mid-1981. Since that time, the Public Health Service has received reports of more than 33,000 cases, about 58 percent of which have resulted in death. An estimated one and one-half million people have been infected by the virus that causes AIDS but have no symptoms of illness. AIDS is a public health problem that merits serious concern. It is a major priority of the U.S. Public Health Service. Researchers in the Public Health Service and in many major medical institutions have been working for [6] years to study AIDS and development treatments and preventive measures."

122. Public Health Service, Centers for Disease Control, "Hepatitis B Vaccine: Evidence Confirming Lack of AIDS Transmission." Morbidity and Mortality Weekly Report, December 14, 1984; 33 (49): 685-87.

"Recent studies have provided important additional assurances concerning the safety of hepatitis B (HB) vaccine. The vaccine currently licensed in the United States is produced from pooled plasma of hepatitis B surface antigen-positive individuals, some of whom are also in high-risk groups for AIDS. Concern has been expressed that the etiologic agent of AIDS might be present in the vaccine and survive the inactivation steps used in the manufacturing procedure. . . .The effect of the HB vaccine inactivation process on the AIDS virus and two other human retroviruses (HTLV-I and HTLV-II) was studied. . . .No residual virus was detected in material treated with formalin or urea, although material treated with pepsin at pH 2 did have residual virus present. . . .The vaccine contained no detectable AIDS virus-related sequences at a sensitivity of less than one picogram of DNA per 20-microgram dose of vaccine. . . .No seroconversions were detected in 19 individuals who had received vaccine manufactured from plasma pools that contained plasma of homosexual men. . . .To date, 68 AIDS cases have been reported among approximately 700,000 U.S. HB vaccine recipients; 65 have occurred among persons with known AIDS risk factors. . . .[T]he rate of AIDS for HB vaccine recipients in vaccine trials among homosexually active men does not differ from that for men screened for possible participation in the trials but who received no HB vaccine because they were found immune to HB."

123. Public Health Service, Centers for Disease Control, "Hepatitis B Virus Vaccine Safety: Report of an Inter-Agency Group." Morbidity and Mortality Weekly Report, September 3, 1982; 31 (34): 465-67.

The available data on hepatitis B vaccine efficacy and safety were reviewed by the Inter-Agency Group to Monitor Vaccine Development, Production, and Usage. The findings support the statement of the Immunization Practices Advisory Committee (ACIP) on hepatitis vaccine: (1) immediate side effects are minimal after receipt of HB vaccine; (2) no long-term reactions have been reported; (3) the purification and inactivation process is known to inactivate representatives of all known groups of animal viruses: (4) each lot is safety tested in primates; and (5) no known cases of hepatitis B or non-A/non-B hepatitis have been transmitted by the vaccine and no known occurrence of AIDS has been associated with the vaccine.

124. Public Health Service, Centers for Disease Control, "Kaposi's Sarcoma and Pneumocystis Pneumonia Among Homosexual Men -- New York City and California." Morbidity and Mortality Weekly Report, July 3, 1981; 30 (25): 305-08.

It is noted that during the previous 30 months, "Kaposi's sarcoma (KS), an uncommonly reported malignancy in the United States, had been diagnosed in 26 homosexual men (20 in New York City, 6 in California). The 26 patients ranged in age from 26-51 years. Eight of these patients died . . . all 8 within 24 months after KS was diagnosed." Seven KS patients had serious infections diagnosed after their initial physician visit. Six patients had pneumonia (4 biopsy confirmed as due to Pneumocystis carinii [PC])and one had necrotizing toxoplasmosis of the central nervous system. It is noted that the annual incidence of KS in the United States has been estimated at between 0.02 to 0.06 per 100,000 and that it affects primarily elderly males. Although it is not certain that the increase in KS and PC pneumonia is restricted to homosexual men, the vast majority of recent cases had been reported from this group. It is suggested that physicians should be alert for Kaposi's sarcoma, PC pneumonia, and other opportunistic infections associated with immunosuppression in homosexual men.

125. Public Health Service, Centers for Disease Control, "Pneumocystis Pneumonia -- Los Angeles." Morbidity and Mortality Weekly Report, June 5, 1981; 30 (21): 250-52.

"In the period October 1980-May 1981, five young men, all active homosexuals were treated for biopsy-confirmed Pneumocystis carinii pneumonia at three different hospitals in Los Angeles, California. Two of the patients died. All five patients had laboratory-confirmed previous or current cytomegalovirus (CMV) infection and candidal mucosal infection." Case reports of the patients are included. It is noted that Pneumocystis pneumonia is almost exclusively limited to severely immunosuppressed patients. The fact that these patients were all homosexuals suggests an association between some aspect of a homosexual lifestyle or disease acquired through sexual contact and Pneumocystis carinii pneumonia in this population. The observations suggest the possibility of a cellular-immune dysfunction related to a common exposure that predisposes individuals to opportunistic infections.

126. Public Health Service, Centers for Disease Control, "Results of Human T-Lymphotropic Virus Type III Test Kits Reported from Blood Collection Centers -- United States, April 22 - May 19, 1985." Morbidity and Mortality Weekly Report, June 28, 1985; 34 (25): 375-76.

In March 1983 the U.S. Public Health Service recommended that members of groups at increased risk for AIDS refrain from donating plasma and/or blood. Since that recommendation, evidence has shown that a retrovirus, human T-lymphotropic virus type III (HTLV-III) is the cause of AIDS. An ELISA test designed to detect antibody to HTLV-III was developed. In early March ELISA test kits developed for detecting antibody to HTLV-III in donated blood and plasma were licensed and made commercially available. The data shown represent about 7 percent of all blood collected in the United States during a 1-month period. They demonstrate rapid implementation of HTLV-III antibody screening nationally. During this period, 131 blood centers and banks reported results from screening 593,831 units of blood. An initially reactive test was found for 5,313 units (0.89 percent); 1,484 units (0.25 percent) were repeatedly reactive. Repeatedly reactive rates varied by region of the country, ranging from 0.08 percent (Northwest) to 0.32 (Northeast) percent.

127. Public Health Service, Centers for Disease Control, "Update: Human Immunodeficiency Virus Infections in Health-Care Workers Exposed to Blood of Infected Patients." Morbidity and Mortality Weekly Report, May 22, 1987; 36 (19): 285-89.

"Six persons who provided health care to patients with human immunodeficiency virus (HIV) infection and who denied other risk factors have previously been reported to have HIV infection. Four of these cases followed needle-stick exposures to blood from patients infected with HIV. The two additional cases involved persons who provided nursing care to persons with HIV infection. Both had extensive contact with blood or body fluids of the infected patient and neither observed routinely recommended barrier precautions. The Centers for Disease Control (CDC) has received reports of HIV infection in three additional health-care workers following non-needle-stick exposures to blood from infected patients. . . .[It is noted that additional studies indicate that the precise risk of transmission during exposure of open wounds or mucous membranes to contaminated blood cannot be precisely defined but it must be very low. However,] these cases emphasize the need to implement and strictly enforce previous recommendations for minimizing the risk of exposure to blood and body fluids of all patients in order to prevent transmission of HIV infection."

128. Quinn, T.C., "Acquired Immunodeficiency Syndrome: An Update." Epidemiological Bulletin (Pan American Health Organization), 1985; 6 (1): 1-9.

Information on all aspects of AIDS is summarized and updated. It is noted that the vast majority of cases within the United States continue to occur among persons in the major identified risk categories, while cases occurring in tropical countries appear to lack previously recognized risk factors and heterosexual transmission appears to be a major mode of transmission. The cause appears to be an infectious agent, probably a retrovirus which can be transmitted by intimate sexual contact or by percutaneous inoculation of infectious blood, through contaminated needles or through blood products. AIDS is a distinctive disease of the immune system in which the common denominator is a profound immunosuppressed state based on defects of the cell-mediated immune system with secondary effects of the humoral immune system. The clinical spectrum is quite diverse. The treatment of patients with AIDS has been unrewarding, since the patients are often infected with multiple opportunistic infections for which no therapy may be available. Until a vaccine is developed or a successful treatment is identified, it is likely that the number of cases of AIDS and related diseases will continue to increase in epidemic numbers throughout the world.

129. Quinn, T.C., P. Piot, J.B. McCormick et al., "Serologic and Immunologic Studies in Patients With AIDS in North America and Africa: The Potential Role of Infectious Agents as Cofactors in Human Immunodeficiency Virus Infection." Journal of the American Medical Association, May 15, 1987; 257 (19): 2617-21.

"Serologic and immunologic studies were performed in 38 African and 60 United States patients with AIDS, 100 African and 100 U.S. heterosexual men and women, and 100 U.S. homosexual men to examine the potential role of infectious agents in human immunodeficiency virus (HIV) infection. There were no significant differences in the prevalence of antibodies to cytomegalovirus, Epstein-Barr virus, hepatitis A and B viruses, herpes simplex virus, syphilis, and toxoplasmosis among the African and U.S. patients with AIDS, African heterosexual controls, and U.S. homosexual men. However, these four groups all demonstrated a significantly greater prevalence of antibodies to each of these infectious agents compared with U.S. heterosexual men. . . .[The] data demonstrate that the immune systems of African heterosexuals, similar to those of U.S. homosexual men, are in a chronically activated state associated with chronic viral and parasitic antigenic exposure, which may cause them to be particularly susceptible to HIV infection or disease progression."

130. Rivin, B.E., J.M. Monroe, B.P. Hubschman et al., "AIDS Outcome: A First Follow-Up" [Letter]. New England Journal of Medicine, September 27, 1984; 311 (13): 857.

This letter to the editor describes a New York City Department of Health follow-up study of the first 1410 cases of AIDS reported in New York City to quantify more accurately the morbidity, mortality, and clinical and outpatient course of the disease. Of the 1319 patients on whom data were collected, 254 were lost to follow-up. Of the remaining 1065, 69 percent (731) were dead and 31 percent (331) were alive. Length of hospital stay; information about ambulation, work, and home-care status; and information about additional diagnoses are provided. The study updates morbidity and diagnosis-specific mortality trends, and allows a better understanding of the social and economic impact of AIDS on New York City, in which AIDS cases account for 40 percent of the reported national total.

131. Schaffner, A., "Acquired Immune Deficiency Syndrome: Is Disseminated Aspergillosis Predictive of Underlying Cellular Immune Deficiency?" Journal of Infectious Diseases, May 1984; 149 (5): 828-29.

This letter to the editor disputes the contention that disseminated aspergillosis is at least moderately suggestive of underlying cellular immune deficiency and is thus a marker-infection for the diagnosis of AIDS. The fact that steroids render patients susceptible to aspergillosis cannot be taken as evidence for a role of T cell-mediated immunity in aspergillosis. Additionally, there are no experimental data supporting a role for T lymphocytes in immunity to aspergillosis. In response, and in view of the lack of aspergillus infections among reported AIDS patients, aspergillosis was deleted from the list of infections considered at least moderately predictive of AIDS.

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132. Schecter, J., "The Frustrating Fight Against AIDS." Technology Review, July 1987; 90 (5): 65.

The modes of action of the AIDS virus and of the AIDS drug AZT (3'-azido-3'-deoxythymidine) are described. The AIDS virus enters and takes over a human cell in a way that should give medicine many opportunities to intervene, but the search for effective drugs and vaccines against AIDS has been disappointing. AZT is the only AIDS drug the Food and Drug Administration (FDA) has approved for prescription sales. Clinicians have a great deal of hope for AZT, but since AZT does not kill the virus, patients have to keep on taking the drug. Moreover, while AZT has worked remarkably well on some AIDS patients, the side effects make the drug an impossible option for others. Since AZT also stops other essential forms of DNA synthesis -- in bone marrow, for instance -- it can keep the patient's bone marrow from churning out essential red and white blood cells. Dideoxycytidine (DDC) is another drug that functions much like AZT, appears to have fewer side effects, and may be similarly effective. At least one major pharmaceutical company is now testing its effectiveness in human trials.

133. Schupbach, J., M. Popovic, R.V. Gilden et al., "Serological Analysis of a Subgroup of Human T-Lymphotropic Retroviruses (HTLV-III) Associated with AIDS." Science, May 4, 1984; 224 (4648): 503-05.

"In the studies described in this report, virus-associated antigens in T-cell clones permanently producing HTLV-III were subjected to biochemical and immunological analyses. Antigens of HTLV-III, specifically detected by antibodies in serum from AIDS or pre-AIDS patients and revealed by the Western blot technique, are similar in size to those found in other subgroups of HTLV. They include at least three serologically unrelated antigenic groups, one of which is associated with group specific antigens (p55 and p24) and another with envelope-related (p65) proteins, while the antigens in the third group are of unknown affiliation. The data show that HTLV-III is clearly distinguishable from HTLV-I and HTLV-II but is also significantly related to both viruses. HTLV-III is thus a true member of the HTLV family."

134. Selwyn, P.A., "AIDS: What Is Now Known. I. History and Immunovirology." Hospital Practice, May 15, 1986: 67-82.

"[This] first installment of a four-part summation of the current state of understanding of AIDS traces the . . . history of the epidemic. It also reviews the remarkable progress made in investigating the viral etiology, the immunologic dysfunctions, and the patterns of transmission of the syndrome, and evaluates the possibilities for eventual prophylaxis and therapy." AIDS research has progressed dramatically in the few years since the syndrome was first recognized, although the prospect of effective treatment or cure remains elusive. Nevertheless, much has been learned about the virology, immunology, epidemiology, and natural history of AIDS and HTLV-III infection.

135. Selwyn, P.A., "AIDS: What Is Now Known. II. Epidemiology." Hospital Practice, June 15, 1986: 127-64.

This second installment of a four-part summation of the current state of understanding of AIDS presents a detailed discussion of the epidemiology of transmission and the risk of disease in the major U.S. risk groups, with applications for the general population as well. Also included is an examination of AIDS outside the United States. "Worldwide epidemiologic patterns foreshadow further heterosexual and vertical transmission of AIDS and highlight the need to address the full dimensions of a true public health emergency as well as to protect vulnerable individuals against unwarranted discrimination. The alternatives may be either an unchecked epidemic or an oppressive quarantine unparalleled in recent medical history." As the epidemic begins to extend to other parts of the country outside known high-risk areas, familiarity with what is known about transmission and prevention becomes more and more essential.

136. Selwyn, P.A., "AIDS: What Is Now Known. III. Clinical Aspects." Hospital Practice, September 15, 1986: 119-53.

This third installment of a four-part summation of the current state of understanding of AIDS focuses on the "clinical aspects of AIDS, starting with the initial acute infection by HTLV-III/LAV, continuing through the broad range of AIDS-related conditions, and finally examining the full-blown syndrome with its associated opportunistic infections and neoplasms . . . Even as the AIDS epidemic spreads with apparent relentlessness, so has the knowledge of the natural history of the HTLV-III/LAV infection. Prodromal syndromes, manifest within weeks of viral infection, have been defined and temporally related to seroconversion. Similarly, effects on different organ systems and on susceptibility to other infections and malignancy have been delineated."

137. Selwyn, P.A., "AIDS: What Is Now Known. IV. Psychosocial Aspects, Treatment Prospects." Hospital Practice, October 15, 1986: 125-64.

This fourth installment of a four-part summation of the current state of understanding of AIDS "address[es] relevant psychosocial aspects of the disease, and . . . also consider[s] current and future prospects for treatment and prevention . . . In the absence of specific chemotherapy or vaccines, strategies for containing the epidemic must focus on host and environmental factors -- the psychosocial front. There is ample evidence that counseling of would-be blood donors and modification of high-risk practices can prevent transmission of HTLV-III/LAV virus and slow, and eventually even reverse, the growth of the infected population."

138. Shannon, K. and A. Ammann, "Acquired Immune Deficiency Syndrome in Childhood." Journal of Pediatrics, 1985; 106 (2): 332-42.

Information is presented that would be useful to physicians faced with the diagnosis and care of children with AIDS. Specific aspects of immunity are discussed, with special reference to the tests of immunologic functions that are useful in the evaluation of patients suspected of having AIDS. The immunopathology, including recent developments related to HTLV-III, is described. The article concludes with clinical features, laboratory evaluations, and management. Although the cellular immune defects and cause of all cases of AIDS are likely to be similar, certain children are at especially high risk: those with hemophilia A or B, infants with associated risk factors (Haitian background, parental intravenous drug abuse, or prostitution), and patients receiving multiple transfusions. AIDS should be considered in the differential diagnosis of childhood immunodeficiency and it must be distinguished from congenital disorders. The infant or young child with AIDS presents especially difficult clinical and social problems related to recurrent infection and poor nutrition. The important of epidemiologic, clinical, and laboratory data in diagnosis and the aggressive management of infectious complications are emphasized.

139. Stover, D., D.A. White, P.A. Romano et al., "Spectrum of Pulmonary Diseases Associated with the Acquired Immune Deficiency Syndrome." American Journal of Medicine, 1985; 78 (3): 429-37.

"Over a four-year period, 130 patients with [AIDS] were studied to assess the incidence and spectrum of pulmonary disease associated with this illness. In 61 patients, respiratory abnormalities were either present on admission or later developed. Multiple pathologic processes were present simultaneously in 24 patients and serial pulmonary problems developed in seven patients. Infection was the most common cause of pulmonary parenchymal disease and was due to Pneumocystis carinii (35 patients), cytomegalovirus (21 patients), Mycobacterium avium-intracellulare (13 patients), and bacteria (4 patients). Noninfectious causes of parenchymal lung diseases were also frequently seen and included Kaposi's sarcoma (eight patients), nonspecific pneumonitis (seven patients), and adult respiratory distress syndrome (four patients). Significant pleural disease was present in six cases and was usually related to Kaposi's sarcoma. A bronchospastic disorder developed in four patients. Pulmonary function tests, in particular the diffusing capacity and the difference between rest and exercise alveolar-arterial oxygen tension, were helpful in screening for pulmonary diseases. Patterns of clinical features and radiographic abnormalities were recognized and suggested specific diagnoses. Overall mortality from respiratory causes identified during the study was 41 percent, but varied markedly with the etiologic agent. Respiratory failure, however, carried a 100 percent mortality despite the underlying cause."

140. Thompson, S. and K. Gietz, "Acquired Immune Deficiency Syndrome in Infants and Children." Pediatric Nursing, 1985; 11(4): 278-80, 291.

Cases of AIDS are reported among infants and children of high-risk groups, children with hemophilia, and children receiving blood or blood components presumably containing the etiologic agent. In infants and children, AIDS may result from percutaneous inoculation with blood or blood products. AIDS may also be transmitted during pregnancy and/or at delivery. Infants and children with AIDS have abnormal T cell functioning. Because many inherited or congenital immune deficiency disorders become evident within the first six months of life, the question is whether these infants have AIDS or a congenital immune deficiency disorder. With altered cell-mediated immunity, these infants and children become prey to many opportunistic organismscausing overwhelming infections. No cure for AIDS currently exists. Treatment and nursing care are supportive and designed to prevent and alleviate opportunistic disease.

141. Winkelstein, W. Jr., D.M. Lyman, N. Padian et al., "Sexual Practices and Risk of Infection by the Human Immunodeficiency Virus: The San Francisco Men's Health Study." Journal of the American Medical Association, January 16, 1987; 257 (3): 321-25.

"The San Francisco Men's Health Study is a prospective study of the epidemiology and natural history of AIDS in a cohort of 1034 single men, 25 to 54 years of age, recruited by multistage probability sampling. At entry, June 1984 through January 1985, the seropositivity rate for human immunodeficiency virus (HIV) infection among homosexual/bisexual study participants was 48.5 percent. No heterosexual participants were HIV seropositive. Among homosexual/bisexual men reporting no male sexual partners in the two years before entry into the study, seropositivity was 17.6 percent. For those reporting more than 50 partners, seropositivity was 70.8 percent. Only receptive anal/genital contact had a significantly elevated risk of HIV infection. Douching was the only ancillary sexual practice that contributed significantly to risk of infection."

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[illegible]43. Altman, L.K., "Does the AIDS Virus Work Alone?" New York Times, May 26, 1987.

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144. Altman, L.K., "Inherited Factor May Play a Role in Risk of AIDS: Varying Protein Is Tied to Growth of Disease." New York Times, May 10, 1987.

145. Altman, L.K., "Spread of AIDS Virus Is Unabated Among Intravenous Drug Takers." New York Times, June 4, 1987.

146. Altman, L.K., "Two Virtually Identical Viruses Present New AIDS Problem." New York Times, April 9, 1987.

147. Boodman, S.G., D. Colburn, S. Rovner et al., "AIDS Notebook: 70 Transfusion Cases a Year Seen." Washington Post, June 5, 1987.

148. Boodman, S.G., D. Colburn, S. Rovner et al., "AIDS Notebook: AIDS Leading Cause of Death of N.Y. Women Aged 25 to 34." Washington Post, June 5, 1987.

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152. Lambert, B., "Deaths from AIDS Soar in New York: City Health Unit Shows 59% Increase Over 1985 -- Rise Among Women." New York Times, July 7, 1987.

153. Okie, S., "World's AIDS Experts Convene: 6,000 Expected to Hear Data on Related Virus and Human Vaccine." Washington Post, June 1, 1987.

154. Okie, S., P. Berg and D. Colburn, "AIDS Notebook: Patients' Survival Time Unchanged in Study." Washington Post, June 4, 1987.

155. Schmidt, W.E., "High AIDS Rate Spurring Efforts For Minorities." New York Times, August 2, 1987.

156. Specter, M., "AIDS Carriers May Be Increasingly Infectious." Washington Post, June 4, 1987.

157. Specter, M., "CDC Report on AIDS Played Down: Health Workers Reassured About Danger of Handling Blood." Washington Post, May 24, 1987.

158. Staff, "AIDS" (conference report). The Lancet, July 5, 1986; 2 (8497): 51.

Epidemiology

159. Staff, "AIDS: Good News and Bad News [Editorial]." New York Times, June 15, 1987.

160. Staff, "AIDS Notebook: Programs Focus on Blood Supply." Washington Post, June 3, 1987.

161. Staff, "'Second AIDS Virus' Stirs New Debate." Medical World News, April 27, 1987.

162. Staff, "Study Sees Low AIDS Risk for Women in Single Episode." New York Times, June 6, 1987.

163. Thompson, L., "AIDS and Minorities: As the Disease Claims More Blacks and Hispanics, Leaders Struggle for Solutions." Washington Post (Health section), August 11, 1987.

164. Thompson, L., "Genetic Approach Planned for AIDS." Washington Post (Health section), May 26, 1987.

165. United Press International, "Despite Test, AIDS Virus Transmitted in Transplant." Washington Post, May 29, 1987.

FEDERAL POLICY

166. Bibisi, S., "Federal Attention Prods Many States to Target AIDS." AHA News, May 11, 1987; 23 (18): 1, 5.

The AIDS-related policies and legislative activities of many states are reviewed. "In the past two years, state legislatures have been quick to offer measures to quell the AIDS epidemic, . . . [and] the number of states that have either considered or passed AIDS-related legislation this year more than doubled from last year. . . . This session, 44 states have passed or introduced AIDS-related bills, with 30 states having considered mandatory premarital testing for AIDS antibodies. . . . Although most state lawmakers are still debating the AIDS-related legislation, 16 states made such bills law this session."

167. Bibisi, S., "Federal Lawmakers Draft New AIDS Bill to Contain Crisis." AHA News, May 11, 1987; 23 (18): 5.

Examples of legislation planned by federal lawmakers to cope with the AIDS crisis are described. While four of the proposed plans would provide financial assistance for treatment, prevention, or research, one would additionally "waive for five years the 24-month waiting period of Medicare eligibility for AIDS patients." The formation of a presidential commission on AIDS has also been approved to help government officials establish a plan for coping with the disease.

168. Fox, D.M., "AIDS and the American Health Polity: The History and Prospects of a Crisis of Authority." The Milbank Quarterly, 1986, Vol. 64, Supplement 1: 7-33.

The crisis of authority in the American health "polity" [sic] and its effects on the response to AIDS are described. It is suggested that, "when the AIDS epidemic began, a profound crisis was transforming the American [conception of and response to health and illness.] The roots of the crisis . . . include changes in the causes of sickness and death . . . ; ambivalence . . . about progress of medical research . . . ; a sense that the cost of health care was rising uncontrollably . . . ; and an increase in the power of the private sector and the states." The article analyzes contemporary history, identifies shortcomings in American health polity response to illness, and describes how these flaws have been revealed more clearly by the AIDS epidemic. It is suggested that "lessons should be drawn from the history of the response to AIDS of the American health polity. If they are not, the 1980s [may become a] time when many Americans [become] increasingly complacent about the consequences of dread disease and unwilling to insist that the individuals and institutions of the health polity struggle against them."

169. General Accounting Office, "AIDS Prevention: Views on the Administration's Budget Proposals -- Briefing Report to the Chairman, Subcommittee on Labor, Health and Human Services, Education and Related Agencies, Committee on Appropriations, United States Senate." U.S. General Accounting Office, Publication No. HRD-87-126BR, Washington, D.C., August 1987.

This briefing report [explores] . . . the adequacy of the funding levels proposed for the Department of Health and Human Services' Public Health Service and the appropriateness of priorities reflected in the administration's proposed budget for AIDS prevention. [The focus is] on education, testing, and counseling services." There was a consensus among the experts that the proposed funding levels for prevention activities are not adequate. Specific budget increases suggested by one or more of the experts, without regard to competing federal health priorities or fiscal constraints are included. The experts also suggested that the perceived lack of federal leadership is at least as troublesome as estimated shortfalls in the budget.

170. Institute of Medicine, National Academy of Sciences, Summary and Recommendations: Confronting AIDS -- Directions for Public Health, Health Care, and Research. National Academy Press, Washington, D.C. 1986.

Wide-ranging and intensive efforts to stem the spread of AIDS and a long-term national commitment to produce a vaccine and therapeutic drugs are suggested. "A massive, continuing campaign should begin immediately to increase awareness of ways in which persons can protect themselves against infection. . . . The committee estimates that by the end of the decade approximately $1 billion annually, much of it from federal sources, will be needed for education and other public health measures. . . . The committee also believes that a vaccine and agents that are acceptably safe for possible long-term treatment and that effectively halt or cure the disease may not be available for at least five years. The committee calls for extensive basic and applied biomedical investigations to better understand the disease and increase the likelihood of producing a vaccine or drug as soon as possible. . . . Such a program of research would require at least $1 billion in [newly appropriated] public funds annually by 1990 and a continuing commitment over many years. . . . A $2-billion yearly expenditure [is] proposed for responding to the [health care needs of the victims of the] epidemic. . . . The committee believes that the United States should be a full participant in international efforts on the problem."

171. Kuller, L.H. and L.A. Kingsley, "The Epidemic of AIDS: A Failure of Public Health Policy." The Milbank Quarterly, 1986, Vol. 64, Supplement 1: 56-78.

The efforts to reduce the incidence of new infection with HTLV-III/LAV are described and reviewed. "At present . . . two simultaneous . . . strategies guide efforts to prevent infection: (1) protection of the uninfected high-risk individual from infection . . . ; and (2) prevention of the spread of the epidemic into lower-risk populations. . . . [It is suggested that] to date these efforts have not been very successful and [that they] represent a failure of public health policy." The paper focuses on the transmission of infection of AIDS among homosexual men and the approaches that are probably necessary to modify the epidemic. "The major efforts with these populations must be to prevent the transmission of the infection and disease outside of these very high-risk subgroups. At the same time, there must be more extensive research to reduce the risk of acquiring clinical disease among those already infected. . . . To date, the federal public health response to control of the epidemic through behavior change has been weak. . . . [It is suggested] that education will have to be paralleled by vigorous screening and surveillance [and that] the lack of a responsible public health organization for the nation may prove to be the greatest handicap."

172. Lee, P.R. and P.S. Arno, "The Federal Response to the AIDS Epidemic." Health Policy, 1986, 6: 259-67.

"The response of the U.S. government to the AIDS epidemic is reviewed within the context of health policy-making in the [United States] in general and the reduced role of the federal government in domestic social programs in particular. This review involves multiple levels of government, the relationship of government to the private sector, the diffusion of authority within a federal system, the long delays in policy implementation because of the absence of mechanisms to deal with emergency situations, [and] the tendency to fund the response to AIDS from reallocation of appropriated funds, thereby creating financial distress for existing programs. The federal response to AIDS is considered uncoordinated, insufficient and inadequate in particular with respect to the support of public health education and the financing of health care for AIDS patients. These are needed while a vaccine may still be years away."

173. Matthews, G.W. and V.S. Neslund, "The Initial Impact of AIDS on Public Health Law in the United States -- 1986." Journal of the American Medical Association, January 16, 1987; 257 (3): 344-52.

"AIDS-related litigation and legislation that have appeared to date [are reviewed, and] some perspective as to the impacts of these cases and statutes on public health law [is suggested]. [The discussion] is grouped into three parts. Part 1 describes the legal aspects of the various state and federal health policies and initiatives to control AIDS. Part 2 presents the legal liability controversies resulting from cases of AIDS transmission. Part 3 describes public health involvement in resolving the growing array of AIDS discrimination issues. . . . [It is suggested that] given the emotionally charged aspects of this disease, it is not likely that all the pending legal issues will be resolved through one comprehensive effort. Rather, [the] issues will probably evolve a step at a time, at distinct rates of progress yet on many different fronts simultaneously."

174. Norman, C., "Congress Readies AIDS Funding Transfusion." Science, October 25, 1985; 230 (4724): 418-19.

The Administration's announcement that AIDS is its number one health priority had come into conflict with the number one economic priority, which is to reduce the size of the federal deficit. "Legislation now working its way through Congress is expected to push total funds for [AIDS research and education] over $200 million in fiscal year 1986. . . . Exactly how the new funds will be spent is unclear, but several programs will get major boosts. . . . Getting [all the] answers to . . . the research puzzles is going to take a lot of time, money, and [effort]. The $200 million about to be approved by Congress for research and education on AIDS is clearly just one installment in what will be a long and expensive struggle to understand this disease."

175. O'Hara, J.J. and G.J. Stangler, "AIDS and the Human Services." Public Welfare, Summer 1986; 44 (3): 7-13.

How the individual states will respond to the AIDS crisis and what are or will be the major issues confronting human services agencies are discussed. "The climate of Gramm-Rudman makes any large-scale federal assistance for the care and treatment of AIDS patients appear unlikely. . . . The issues that need to be considered in developing [state-wide policies for all state agencies] and the process by which these policies [are] developed are the focal points of the article." Services for children with AIDS, services implementation and cost, and the calming of public fears are discussed with particular reference to the state of Missouri. A summary of various legislative proposals enacted or considered by various states is included.

176. Public Health Service, AIDS Information/Education Plan to Prevent and Control AIDS in the United States. Washington, D.C.: U.S. Department of Health and Human Services, Public Health Service, March 1987.

A massive campaign to educate the public on AIDS is presented. The effort consists of four major components: (1) the public, making everyone aware of behavior that puts them at risk; (2) school and college-aged population, providing an effective channel for instructing young people about AIDS before and as they reach the ages where they might engage in behaviors that place them at risk of infection; (3) persons at increased risk or already infected, making the highest priority for AIDS information and education efforts to prevent transmission of the virus to others; and (4) health workers, giving them direct responsibility for patient care, for counseling AIDS patients, and for providing leadership in informing and educating the public.

177. Public Health Service, Centers for Disease Control, "AIDS: CDC's Role." Perspectives on Prevention, Spring 1987; 1 (3): 37-40.

The role of the Centers for Disease Control (CDC) in the battle against AIDS is described. The CDC is the lead agency for surveillance and epidemiology and recently has been designated the lead agency to provide information or education to the public in order to reduce individual risk and to prevent transmission of the disease. AIDS-related activities include national surveillance of the AIDS epidemic; national and international epidemiologic studies to identify risk factors and define methods of transmission; the development and evaluation of prevention strategies; development of an animal model for AIDS; and provision of technical assistance and consultation to state and local health departments and community organizations conducting health education and risk reduction.

178. Public Health Service, Health Resources and Services Administration, Report of the Surgeon General's Workshop on Children With HIV Infection and Their Families. Washington, D.C.: Department of Health and Human Services, Public Health Service, Publication No. HRS-D-MC 87-1, 1987.

"This Surgeon General's Workshop on Children with HIV Infection and Their Families provided an opportunity to summarize the current knowledge about AIDS in children and to make recommendations about future directions in research, prevention, and amelioration of the effects of pediatric AIDS." Held at the Children's Hospital of Philadelphia on April 6-8, 1987, the workshop covered topics on epidemiology, prevention through education, patient care, service delivery, and legal issues relating to pediatric AIDS. The resulting report includes excerpts from the 15 papers presented to the conference plenary sessions and summaries of recommendations from the 10 work groups. Among specific recommendations made were the need for limited screening studies; training for pediatric subspecialists to care for children with HIV infection; care of HIV-infected children within the family (natural or foster) setting; mandatory coverage by all states under Medicaid of approved drugs, foster care, and home nursing care for HIV-infected children; and development of national AIDS prevention campaign aimed at adolescents and youth that would include information on AIDS as well as development of self esteem and personal and decisionmaking skills.

179. Runck, B., "NIMH Report: Federal Government Intensifies Its Efforts in the Mental Health Aspects of AIDS." Hospital and Community Psychiatry, March 1986; 37 (3): 219-21.

The concern over the mental health aspects of AIDS and related conditions and increased federal support for research and education are described. "For fiscal year 1986, Congress appropriated $5.297 million for AIDS activities at the National Institute of Mental Health. . . . [This] money reflects, in part, intensified AIDS activities throughout the [United States] Public Health Service [(PHS) and increasing] concern about the mental health aspects of AIDS, [concern that] has been stimulated by accumulating clinical experience and research findings. Approximately three-fourths of the 1986 NIMH AIDS budget will support research." Other objectives include educating health and mental health professionals who care for people with AIDS and related conditions and making information available to scientists, practitioners, and the public.

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180. Boffey, P.M., "Reagan Names 12 to Panel on AIDS: Health Officials Are Puzzled by Members' Credentials." New York Times, July 24, 1987.

181. Boodman, S.G., "AIDS Panel Appointed By Reagan: President Visits Ill Children at NIH." Washington Post, July 24, 1987.

182. Boodman, S.G., "Mayo Clinic Official Heads AIDS Panel: Reagan-Appointed Endocrinologist Not a Specialist in the Disease." Washington Post, June 26, 1987.

183. Davidson, J., "Senate Panel Backs Bill for Education, Research on AIDS." Wall Street Journal, June 18, 1987.

184. Pasztor, A., "Administration May Seek Authority To Deport Illegal Aliens With AIDS." Wall Street Journal, June 9, 1987.

185. Specter, M., "Researchers Protest Exclusion Of Homosexuals From AIDS Panel: Letter to Reagan Urges Rethinking of Commission's Composition." Washington Post, May 28, 1987.

186. Staff, "Who Should Advise on AIDS?" [Editorial]. Washington Post, May 30, 1987.

HEALTH INSURANCE AND MEDICAID COVERAGE

187. Bibisi, S., "Medicaid offers states some help for funding AIDS programs." AHA News, May 11, 1987; 23 (18): 5.

States considering how to deal with the AIDS crisis may find some help from Medicaid. Most state Medicaid programs cover medical costs for two classes of residents: the financially or "categorically" needy and the medically needy. In Georgia and Texas, however, patients must "spend down" to become eligible for help for the financially needy. Pennsylvania excludes prescription drugs from its program for the medically needy, so its AIDS patients are not covered for azidothymidine (AZT) therapy. Financially needy AIDS patients can receive hospital care; rural clinic, physicians' and home health services; as well as skilled nursing facilities through Medicaid. Some states with larger numbers of AIDS patients apply for Medicaid waivers from HCFA so they can provide personal care, medical day care, narcotic and drug abuse therapy, nursing, and foster care to AIDS patients through Medicaid.

188. Hammond, J.D. and A.F. Shapiro, "AIDS and the Limits of Insurability." The Milbank Quarterly, 1986, Vol. 64, Suppl. 1: 143-67.

This paper reviews the criteria for insurability. Similarly, the problems of moral hazard and adverse selection are examined within the context of the insurance technique. The concepts of insurability are uniformly applicable to AIDS across life, health, and liability insurance. This report, however, focuses on life and health insurance. Although the liability insurance dimensions of AIDS are new, they show no evidence of being more severe than many other liability exposures. Pricing fundamentals are included in the review. Tentative observations are offered relative to the insurability of AIDS. The principal one is that economic losses from AIDS cannot adequately be addressed by the insurance technique.

189. Health Care Financing Administration, Office of the Actuary, "Revised Estimates of Medicaid Impact of AIDS," Baltimore, Maryland, June 1986.

This report, using assumptions developed at the PHS Coolfont Conference, estimates the impact of AIDS on Medicaid from 1986 through 1991.

190. Health Insurance Association of America and American Council of Life Insurance, "Results of the Health Insurance Association of America and the American Council of Life Insurance AIDS Survey of Member Companies," 1986.

This paper reports results of an AIDS survey sent to 738 companies that are members of HIAA and/or ACLI. Included in the results are 325 (44 percent) of the companies. The responding companies represent 72 percent of the health insurance premiums earned and 72 percent of the life insurance in force. Highlights of the responses indicate that companies rate those with AIDS and ARC as uninsurable. Virtually all companies use multiple blood tests, and no company uses ELISA tests only. Eighty-four percent of the firms use ELISA and Western blot tests. All companies apply principles in underwriting AIDS, ARC, and blood test-positive consistently with underwriting other risks. AIDS-incurred claims average $36,159 per individual for medical expense, $29,566 for disability, and $33,471 for death. Medical expense claims on 41 AIDS claimants were for more than $100,000, including 5 for over $200,000. Death claims on 97 AIDS victims were for $100,000 or more. Twenty-two percent of the AIDS death claims were in each of the first two policy years. The medical expense claim experience is only slightly higher for AIDS claimants who have died than for AIDS claimants who have not died; the experience is similar for AIDS and ARC claimants. Most companies provide home health care benefits and skilled nursing facility care benefits; most also provide continuation and conversion of coverage under group medical expense policies.

191. Hidalgo, J., L. Zawistowich and J. Halpern, Utilization of Mental Health Services by AIDS Patients Enrolled in the Medicaid Program. Maryland Department of Health and Mental Hygiene, Baltimore, 1987.

This report outlines the plans for a study to assess the volume, nature, and cost of mental health services used by AIDS patients while enrolled in the Maryland Medical Assistance (Medicaid) program. The study will assess the level of mental health morbidity and comorbidity diagnosed among AIDS patients in the program. The study is intended to contribute to a better understanding of the unique mental health needs of AIDS patients during the course of their illness and of the mix of medical and mental health services provided to AIDS patients in various settings.

192. Luehrs, J., E. Orlebeke and M. Merlis, "AIDS and Medicaid: The Role of Medicaid in Treating Those with AIDS." Public Welfare, Summer 1986; 44 (3): 20-28.

This paper examines the provision and funding of care for AIDS patients, with particular focus on the Medicaid program. Key points are as follows: Care of AIDS patients is paid primarily by private health insurance and Medicaid. A person diagnosed with AIDS is presumed to be disabled by the Social Security Administration. Total Medicaid expenditures are difficult to determine; program records do not always indicate AIDS as the diagnosis. AIDS patients seem to spend more time than necessary in high-cost, inpatient hospital settings. Depending on the number of cases involved, state Medicaid programs can serve eligible AIDS patients within existing program structures. Nursing homes and home health agencies are often reluctant to treat AIDS patients. The paper provides a framework for asking questions about a cost-effective and appropriate role for Medicaid in meeting the needs of AIDS patients.

Health Insurance and Medicaid Coverage

193. McCallum, D. and J. Clark, Sharing the Cost of Caring for the Sufferers of AIDS and ARC. Institute for Health Policy Analysis, Washington, D.C., 1987.

This paper reports on the implications of recent moves to contain health care costs coupled with the need to care for thousands of AIDS patients. There are indications that hospitals treating large numbers of patients are incurring substantial losses. Large urban areas are now and will continue to bear the brunt of financial pressures of caring for AIDS patients. Individuals and institutions must face several specific issues related to the cost and financing of AIDS: (1) What will the costs for AIDS be? (2) How will the medical costs of sufferers of AIDS and ARC be shared: (3) What canbe done to encourage adequate and cost-effective care?

194. Meskin, S. and J. Klemm, "Preliminary Estimate of the Impact of AIDS on the Medicaid Program," Draft. Health Care Financing Administration, Baltimore, Maryland, 1985.

This paper discusses some of the difficulties in obtaining accurate, consistent data on federal Medicaid costs for the care of AIDS patients. The surviving AIDS population over time is projected by estimating new cases with the help of the CDC AIDS data base.

195. Mount, L., Overview of state laws regarding AIDS testing, especially pertaining to the insurance industry [Working Paper, Health Program, Office of Technology Assessment, March 1987].

This paper presents a list of laws pertaining to AIDS testing in 28 states and the District of Columbia.

196. Shahoda, T., "Insurers: Watchful But Not Worried." Hospitals, January 5, 1986; 60 (1): 58.

Although health insurers are keeping a watchful eye on the situation, none of the major firms interviewed plans to change application or underwriting policies to ferret out AIDS patients. Concern is likely to increase, however, as the AIDS population grows. Presumptive disability clauses being added to state Medicaid regulations to cover AIDS patients have some states worried, as do risk pools. HMOs are beginning to feel the effects of AIDS.

Additional References

197. Chase, M., "The Nation Comes to Grips With the Widening Problem of AIDS: How Insurers Succeed in Limiting Their Losses Related to the Disease." Wall Street Journal, May 18, 1987.

Health Insurance and Medicaid Coverage

198. New Jersey, State of, "AIDS Community Care Alternatives Program: Home and Community-Based Services Waiver for Persons with Acquired Immune Deficiency Syndrome (AIDS) or with AIDS-Related Complex (ARC)." State of New Jersey Department of Human Services, Division of Medical Assistance and Health Services, CN-712, Trenton, New Jersey, 1987.

199. Okie, S., P. Berg and D. Colburn, "AIDS Notebook: Insurance, Budgetary Burden Discussed." *Washington Post*, June 3, 1987.

200. Schramm, C.J., "Who Will Pay for AIDS, and How? Not Just Insurance Companies." *New York Times*, June 22, 1987.

201. Staff, "Who's Paying for AIDS Care?" *Medical World News*, August 10, 1987; 28 (15): 20.

202. Sullivan, R., "Insurers To Limit Policies of Buyers Refusing AIDS Test." *New York Times*, June 5, 1987.

203. Sullivan, R., "U.S. Is Easing Benefits Policy On AIDS Cases." *New York Times*, July 28, 1987.

204. Sullivan, R., "Wider AIDS Definition Proposed In Move to Expand U.S. Benefits." *New York Times*, May 1, 1987.

205. Trafford, A., "With Millions of Americans Unprotected, National Health Insurance Gains New Popularity." *Washington Post*, July 7, 1987.

HOSPITAL USE

206. Andress, J.D. and W.J. Alexander, "Impact of AIDS on Alabama Hospital Care" [Letter]. Alabama Journal of Medical Sciences, July 1986; 23 (3): 257.

This letter to the editor reports on a survey of 39 Alabama residents who had been reported as having acquired AIDS since 1982. Fourteen of these persons were residents of Jefferson County and were hospitalized in that county for the majority of their inpatient medical care. The analysis is projected to provide a representative sample of the impact of AIDS on hospital care within Alabama. When compared to care described in other studies, the Alabama care appears to be more expensive. It is suggested that the data may assist local hospital administrators and insurance carriers in planning for the probable increase in morbidity due to AIDS in Alabama.

207. Andrulis, D.P., V.S. Beers and J.D. Bentley et al., "The Provision and Financing of Medical Care for AIDS Patients in U.S. Public and Private Teaching Hospitals." Journal of the American Medical Association, September 11, 1987; 258 (10): 1343-46.

"The National Association of Public Hospitals and the Association of American Medical Colleges' Council of Teaching Hospitals conducted a detailed survey on hospital care to patients with [AIDS] in major [United States] public and private teaching institutions in 1985. The 169 hospitals treating patients with AIDS that responded to the survey reported providing inpatient services to 5,393 patients with AIDS. These patients accounted for 171,205 inpatient days and 8,806 inpatient admissions, with an average length of stay of 19 days. The average costs and revenue for patients with AIDS per day were $635 and $482, respectively, with Medicaid representing the most frequent third-party payer. The average inpatient cost per patient year was $20,320. Using Centers for Disease Control estimates of 18,720 patients diagnosed as having AIDS and alive during any part of 1985, [it was estimated] that the total cost of inpatient care for patients with AIDS was $380 million for that year. . . . [S]ignificant regional and ownership differences [were found] in source of payment for patients with AIDS [as well as] regional differences in revenues received for AIDS treatment. Results indicate that the costs of treating patients with AIDS will profoundly affect major public and private teaching institutions, but that public teaching hospitals in states with restrictive Medicaid programs will be most adversely affected."

208. Belmont, M. et al., "Resource Utilization by AIDS Patients in the Acute Care Hospital." Draft final report and summary of St. Luke's-Roosevelt Hospital Center Study submitted to The Health Services Improvement Fund, Inc., sponsored by Empire State Blue Cross and Blue Shield, December 1985.

A retrospective study of current AIDS treatment and patterns of care based on a medical record audit was implemented at St. Luke's-Roosevelt Hospital Center, a 1,350-bed acute care facility in New York City. The major objective of the study was to describe the use of medical, nursing, and social work resources and time according to patients' severity of illness. The results of the study would be useful for planning coordinated, cost-effective direct care at the level most appropriate to the needs of the AIDS patients within and upon discharge from the hospital. Data analysis supported the study hypothesis that AIDS patients require distinctly different health care at predictable stages of illness and that traditional staffing patterns in the acute care hospital do not provide effective care to patients in each level of the study classification system. Included is a summary of behavior problems that impinge on hospital use and create barriers to discharge. Suggestions are made for alternative methods of care for persons with AIDS-related complex (ARC). Finally, areas for future educational and research directions are identified.

209. Graves, E.J. and M. Moien, "Hospitalizations for AIDS, United States, 1984-5." *American Journal of Public Health*, June 1987; 77 (6): 729-30.

"Data from the National Hospital Discharge Survey on hospitalizations for [AIDS] were analyzed for 1984-85. During 1984, an estimated 10,000 discharges from short-stay hospitals had a diagnosis of AIDS. In 1985, this figure more than doubled to 23,000. Ninety-seven percent of all AIDS discharges were male and 85 percent were between the ages of 25 and 44. Hospitalizations for AIDS accounted for 510,000 days of hospital care and lasted an average of 15.6 days each."

210. Green, J., M. Singer and N. Wintfeld, *The AIDS Epidemic: A Projection of Its Impact on Hospitals, 1986-1991*. Prepared for the Committee on a National Strategy for AIDS, Institute of Medicine, National Academy of Sciences (undated).

"The AIDS epidemic in the United States will have a dramatic impact on the health care delivery system, especially on hospital facilities. By 1991, 12,831 hospital beds in the [United States] will be occupied by AIDS patients, more than by lung cancer patients or automobile accident victims. In San Francisco, one of every ten hospital beds and 19 cents of every dollar spent on inpatient and outpatient therapy will go to the treatment of AIDS. In New York, bed need for AIDS will nearly triple from 645 beds in 1986 to 1,753 by 1991. In the rest of the country outside these cities, the level of hospital [use] by 1991 (1.14 percent of beds and 3.2 percent of treatment costs) will be close to what is being experienced in New York City today. The impact of AIDS on hospital facilities goes beyond these numbers. AIDS patients require added infection control precautions, nursing care, supplies, and complex case management services. Perhaps the most difficult challenge is to face the task of treating young patients with a ravaging disease without the ability to offer a cure."

211. Greene, J., "Community Hospitals to Treat More AIDS Patients." Modern Healthcare, May 8, 1987: 12.

"Community hospitals must prepare for an increasing number of patients suffering from [AIDS]. . . Public hospitals will be deluged by thousands of new AIDS cases in the next five years and must share the burden with community facilities. . . Small numbers of AIDS patients can be treated in general medical units at community hospitals and outpatient clinics if [the staff] are properly trained. . . [Additionally, it is suggested that] there should be a team approach . . . [N]o one person can provide all care."

212. McGuirk, K., "Establishing a Dedicated AIDS Unit." Journal of Nursing Administration, June 1987; 17(6): 25-30.

"In November 1985, St. Clare's Hospital in New York City became the first hospital on the East Coast (the second in the country) to open a separate dedicated unit for AIDS patients. [The] staff succeeded despite some seemingly impossible contradictions: John Cardinal O'Connor of the Archdiocese of New York, who has been opposed to the life-styles of most of the people who would use the unit (gay and IV abusers) urged the creation of the unit; St. Clare's had been bankrupt and virtually dismantled just a few years earlier; and the hospital did not have the financial resources, facilities, or AIDS patient caseload of the larger, well-known New York medical institutions. Through the perseverance of many individuals, stumbling blocks were overcome. The lessons learned at St. Clare's can be applied anywhere."

213. Thomas, E. and D.M. Fox, "An Exploratory Study of the Cost of Treating Patients with AIDS in Selected Hospitals in Metropolitan New York." State University at Stony Brook, draft final report submitted to the Health Services Improvement Fund, Inc., sponsored by Empire State Blue Cross and Blue Shield, 1987.

"The costs of inpatient acute-care services for patients with AIDS in 1985 [were analyzed] in four hospitals in the New York City metropolitan area . . . The analysis of the cost of AIDS [was then extended] to another geographicarea and to a larger sample of patients, which unlike the samples from San Francisco and Massachusetts, [included] children. [The annual cost of AIDS was measured] using data for 294 patients . . . [and] compared to 131 hospitalized patients in San Francisco and 45 in Massachusetts . . . [The] lifetime costs for patients who died in 1985 [were computed and the per diem costs were analyzed] by comparing them with average per diem costs incurred by medical/surgical patients . . . The relationship of risk group, diagnosis and payer on cost [was assessed and the sharing of the cost burden] among third-party payers was estimated."

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214. Selby, T.L., "N.Y. Hospital Opens Acute Care AIDS Unit." American Nurse, May 1986; 18 (5): 3, 18.

215. Sullivan, R., "New York to Turn Hospital into AIDS Center." New York Times, May 28, 1987.

INTERNATIONAL

216. Bartholomew, C., W.C. Saxinger, J.W. Clark *et al.*, "Transmission of HTLV-I and HIV Among Homosexual Men in Trinidad." *Journal of the American Medical Association*, May 15, 1987; 257 (19): 2604-08.

This study was conducted to evaluate the introduction of HIV in an area where HTLV-I is endemic and to evaluate risk factors, outcomes, and the possible interaction of these two retroviruses. The study population consisted of "100 homosexual or bisexual men from Trinidad. High seropositivity for HTLV-I (15 percent vs. 2.4 percent in the general population) was linked to duration of homosexuality and numbers of partners, suggesting that HTLV-I, like HIV, can be transmitted by homosexual sex. Forty percent of homosexuals compared with 0.19 percent of the general population were seropositive for HIV, and sexual contact with U.S. homosexual men and prior history of gonorrhea were major risk factors. The seroprevalence of HIV was three times higher than that for HTLV-I, suggesting that HIV is more efficiently transmitted, especially since HIV appears to have been recently introduced into Trinidad. Altered immune status was prominent in individuals infected with HIV and coinfected with HIV and HTLV-I. Whether HIV/HTLV-I coinfection amplifies clinical effects is a hypothesis that will require further evaluation."

217. Brunet, J.B. and R.A. Ancelle, "The International Occurrence of the Acquired Immunodeficiency Syndrome." *Annals of Internal Medicine*, November 1985; 103 (5): 670-74.

"Through December 1984, a total of 9,932 cases of [AIDS had been] reported, mainly from North and South America and Europe; 85 percent of these cases occurred in the United States. Haiti and the United States have the highest incidence rates--59 and 36 per million population, respectively. Rates in the United States range from 0.3 ([early] in 1981) to 10.4 (end of 1984). Brazil, Canada, Denmark, Switzerland, France, West Germany, the United Kingdom, and the Netherlands show a slower increase. Homosexual men and intravenous drug users are still the main risk groups in the United States and Europe. The disease is prevalent in heterosexual Haitians and Africans whether they live in their own countries or abroad. Cases of the syndrome have been identified in Zaire, Rwanda, Zambia, and Uganda, but its full extent is not yet known. Consistent with the general history of epidemics, the appearance of geographically separated sites of incidence of the syndrome could be linked to population migrations; however, no evidence has been found to identify an index location."

218. Castro, B.G., J.C.C. Fernandez, E.A. de Castilho *et al.*, "Human Immunodeficiency Virus Infection in Brazil" [Letter]. *Journal of the American Medical Association*, May 15, 1987; 257 (19): 2592-93.

This letter stresses that implementing screening blood transfusions for HIV infection is Brazil is proving difficult because blood transfusion is mainly in the control of private commercial organizations, most of which use paid blood donors. No data are available on how often such firms screen the blood donations they purchase. Only about 10 percent of blood is distributed through government centers; even there screening is not done routinely, in part because of the high cost of commercial screening kits. More than 1,000 cases of AIDS were reported in Brazil by the end of 1986, and the distribution seems to be following the same pattern as that in the United States and Europe. In a serological study of five Brazilian cities, the authors found 0.12 percent infection in Rio de Janeiro and 0.06 in Recife. No infection was detected in Curitiba, Salvador, or Macapa, but sample sizes were too small for them to be expected.

219. Clavel, F., K. Mansinho, S. Chamaret et al., "Human Immunodeficiency Virus Type 2 Infection Associated with AIDS in West Africa." New England Journal of Medicine, May 7, 1987; 316 (19): 1180-85.

This paper reports clinical, immunologic, and virologic data on 30 patients, almost all from West Africa, infected with a new retrovirus, HIV-2. The isolation of this retrovirus from two West African patients with AIDS was recently reported. HIV-2 "is related to but distinct from the well-characterized AIDS retrovirus, HIV-1. . . . Seventeen of [the 30] had a clinical syndrome indistinguishable from AIDS (7 of these 17 died). Others had either the AIDS-related complex or no HIV-related symptoms." Serum antibodies of all the patients reacted with HIV-2 in an indirect immunofluorescence assay. "All serum tested contained antibodies reacting with the envelope glycoprotein of the virus in an immunoprecipitation assay. Cross-reactivity of serum antibodies with HIV-1 was detected in a minority of patients and varied according to the assay used. Retroviral isolates were obtained from the blood lymphocytes of 11 patients and were all identified as HIV-2 by nucleic acid hybridization; none hybridized with an HIV-1 probe. Some cases of AIDS in West Africa may be caused by HIV-2, but the extent of the spread of this virus and its clinical correlates will require careful epidemiologic [study]."

220. Marasca, G. and M. McEvoy, "Length of Survival of Patients with Acquired Immune Deficiency Syndrome in the United Kingdom." British Medical Journal, June 28, 1986; 292 (6537): 1727-29.

This paper reports an analysis of the durations of survival of patients with AIDS presenting with differing opportunistic diseases. The analysis was done using "epidemiological data [collected routinely] at the PHLS Communicable Disease Surveillance Centre. The overall crude case fatality rate was 55.4 percent (93/168). The median survival times were: 21.2 months for Kaposi's sarcoma, 12.5 months for Pneumocystis carinii pneumonia, and 13.3 months for other opportunistic infections. The shortest median survival time (6.6 months) was found for those with both Kaposi's sarcoma and P. carinii pneumonia. There were significant differences between durations of survival of patients with Kaposi's sarcoma and those with all other diseases, which indicated impaired cellular immunity apart from opportunistic infections. This analysis shows that those with Kaposi's sarcoma alone have the most favourable prognosis."

221. Norman, C., "Africa and the Origin of AIDS." Science, December 6, 1985; 230 (4730): 1141.

The theory that the AIDS virus originated in Africa has been attacked on both scientific and political grounds; some have contended that searching for the virus's origin is useless. This paper discusses evidence that the retrovirus isolated from wild African Green monkeys may have crossed the species barrier and infected man. Serum samples from Senegalese prostitutes were found to be infected with the monkey virus, not with AIDS. Antibodies to the monkey virus were found in 30 of 289 samples tested. None of those who tested positive for monkey virus had any signs of AIDS or AIDS-related disease. It was also found that serum from only 53 percent of persons in the United States who have antibodies to the AIDS virus react with proteins from monkey virus; nearly 100 percent of serum samples from antibody-positive Africans cross-react with monkey virus antigens. In addition, a virus from macaques that were displaying many of the symptoms of human AIDS patients has been isolated. This research could result in a useful model for studying AIDS and could help find out what makes the AIDS virus so pathogenic.

222. Norman, C., "Politics and Science Clash on African AIDS." Science, December 6, 1985; 230 (4730): 1140, 1142.

Evidence presented at the International Symposium on African AIDS in Brussels indicates that incidence of AIDS is rising sharply in Africa. Because of political sensitivity, however, not one case of it has officially been reported. In Africa, spread of the virus is largely through heterosexual contact, and more children are being affected in utero. One researcher reported that some 12 percent of European AIDS cases are in African patients from 21 different countries. Another paper (scheduled for but withdrawn from the symposium) reported that 93 AIDS patients were seen in Kinshasa between October 1983 and December 1984. A particularly aggressive form of Kaposi's sarcoma was found in Lusaka: 13 patients in 1983, 22 in 1984, and 19 in the first four months of 1985. Many cases of an AIDS-like illness called "slim disease" have been reported in Uganda, and it has been reported to be spreading in Rwanda and Zaire. Other reports indicate that percentages of serum samples containing antibodies to AIDS have been rising in Kenya, Rwanda, and Nigeria.

223. Van Griensven, G.J.P., R.A.P. Tielman, J. Goudsmit et al., "Risk Factors and Prevalence of HIV Antibodies in Homosexual Men in the Netherlands." American Journal of Epidemiology, June 1987; 125 (6): 1048-57.

This paper reports on the first stage of a prospective longitudinal study being conducted to describe and explain the prevalence and incidence of antibodies to HIV as well as the occurrence of AIDS. "Blood samples were collected from 741 healthy homosexual men [who had] multiple sexual partners, between October 1984 and May 1985. Samples were analyzed for the presence of antibodies to [HIV]. Anti-HIV [reactions] were demonstrated in 233 (31 percent) of the respondents. Seropositive respondents engaged in anal receptive techniques with more sexual partners than did seronegative respondents, whereas seronegatives engaged in manual sexual techniques with more sexual partners than did seropositives. [To the extent that] it was possible to control for the interrelations between the measured variables, a direct relation with anti-HIV was established. [It is concluded] that when the number of sexual partners is considered a risk factor for HIV, a clear distinction should be made between the sexual techniques practiced with these partners." Use of cannabis and/or nitrite was another risk factor for the presence of anti-HIV.

Additional References

224. Boodman, S.G., D. Colburn, S. Rovner et al., "AIDS Notebook: Debate Continues on West African Virus." Washington Post, June 5, 1987.

225. Brooke, J., "AIDS Making Rwanda Anxious But Secretive." New York Times, May 29, 1987.

226. Adler, M.W., "Care for patients with HIV infection and AIDS." British Medical Journal, July 4, 1987; 295: 27-30.

The effect of human immunodeficiency virus (HIV) infection and AIDS on the hospital service is discussed and some epidemiological and general questions that need to be answered to plan services are raised. Different approaches that might be used to provide care in the community are reviewed. It is suggested that "there are many ways to look after patients with varying degrees of HIV infection and AIDS. . . . [Time] should allow us to develop a series of models that can be evaluated, such as normal care as carried out at present; more aggressive home care. . .; and day care either in the community or in the hospital. Different models of terminal care might also be assessed. . . . Finally, the social and economic costs of different kinds of care need to be studied to help [in achieving] the most efficacious, acceptable, and cheapest form of care."

227. Bennett, J.A., "What we know about AIDS." American Journal of Nursing, September 1986; 86 (9): 1016-21.

The current knowledge relating to AIDS is reviewed. Starting with a description of disorders likely to emerge with particular immune defects, the article discusses the T4 lymphocyte, cellular and humoral immunity, transmission, diagnosis, and disorders specifically related to AIDS, such as Kaposi's sarcoma and Pneumocystis carinii pneumonia. Vaccines and prospects for a cure are evaluated; more than 3,000 people with AIDS are enrolled in clinical trials and many others are participating in tests of experimental antiviral agents. Estimates that as many as two million Americans may already be infected may lead to the conclusion that 400,000 Americans may develop AIDS over the next seven years.

228. Coleman, D.A., "How to care for an AIDS patient." RN, July 1986; 49 (7): 16-21.

The positive aspects of the nursing care of AIDS patients are discussed. Caring for a patient with AIDS is considered one of the most challenging of nursing assignments. However, it is also suggested that "despite the disease's devastating effects and grim prognosis, there are many things that can be done to stabilize patients physically and emotionally so that they can lead productive lives between hospitalizations." The first priority is to deal with the physical symptoms, and specific recommendations are made to deal with respiratory distress, skin breakdown, diarrhea, and memory loss. Second, the patient with AIDS will need as much emotional support as physical nursing care; he'll be terribly frightened about what is happening to him. The nurse must listen to the patient's perceptions and concerns about his treatment and accept his expressions of anger and defeat. Finally, "the threat of acquiring another opportunistic infection hangs constantly over the patient with AIDS. To decrease the danger, the hospital infections control procedures must be followed meticulously." The patient and his family must be taught how to avoid infection. The nurse can help the patient cope with isolation; build strength through a proper diet; build stamina through activity; and finally prepare the patient for discharge.

229. Cummings, M.A., M. Rapaport and K.L. Cummings, "A Psychiatric Staff Response to Acquired Immune Deficiency Syndrome" [Letter]. American Journal of Psychiatry, May 1986; 143 (5): 682.

This letter to the editor reports a case of AIDS in which ward staff covertly expressed fear, anxiety, and anger. The "case illustrates problems of staff countertransference and acting out that will be common in caring for psychiatrically hospitalized AIDS victims. The initial avoidance of patient care and the later overreaction to the patient's behavior in the absence of verbally exhibited fear, anxiety, and anger regarding contact with the patient demonstrate a range of maladaptive defenses including repression, denial, isolation of affect, and projection of anger. [It is suggested that] this case underlines the imperative need for staff education, verbal ventilation, and physician-staff liaison work to ensure appropriate patient care and adequate staff support."

230. DeHovitz, J., "Planning for the AIDS Epidemic: Public Health Control Measures and the Provision of Patient Care." Journal of Community Health, Winter 1986; 11 (4): 215-18.

This commentary on public health measures and the provision of patient care for AIDS patients presents examples of the many problems raised by the emergence of this disease. Additional important issues are the provision of services to intravenous drug abusers and developing appropriate medical care services for patients with HIV-related disease. It is noted that there is an increasing problem of intravenous drug abusing patients with AIDS being admitted to acute care hospitals for therapy of an opportunistic infection, responding appropriately to therapy, and then returning to actively using drugs and exposing others to HIV infection after discharge. The treatment of AIDS and the associated conditions will place an increasing burden on the health care delivery system, a burden that will be shared by an ever-increasing number of communities. It is suggested that if this moment in medical history can be used as an opportunity to examine such issues as the provision of health education services and the response of the medical care system, then the price that is paid will perhaps not be as devastating as it first appears.

231. DeHovitz, J. and V. Pellegrino, "AIDS Care in New York City: The Comprehensive Care Alternative." New York State Journal of Medicine, May 1987: 298-300.

"The scope of the AIDS epidemic in New York and the unique characteristics of the disease demand that hospitals, as the focal point of the health care system, develop an immediate response to addressing the needs of persons with HIV infection. The most appropriate and meaningful approach is one which is comprehensive and incorporates diverse levels of services. The comprehensive care model . . . represents an appropriate hospital-based response to this epidemic for the immediate future. However, in the absence of an effective vaccine or antiviral therapy to alter the course of the epidemic, [New York City] will be faced with over 10,000 severely ill individuals with HIV infection by 1991. As an outgrowth of the implementation of the comprehensive care model, presumably at multiple hospitals throughout New York City, it may become necessary to designate specialized regional hospital centers for the care of persons with HIV infection. This option, however, requires careful study because of the implications it may have for further isolation of this population."

232. Gotay, C.C., "Models of Terminal Care: A Review of the Research Literature." Clinical and Investigative Medicine, 1983; 6 (3): 131-41.

"Relatively recent recognition of the particular needs of those who are terminally ill has directed attention to the most humane approaches to the provision of care. The strengths and weaknesses of a number of models for the delivery of terminal care, such as hospital-based programs, freestanding facilities, home care services, and day care programs, are reviewed and the relevant research literature is critically evaluated with respect to methodology and findings. Although many shortcomings in research design and a lack of comparability between studies are noted, the data on hospice care generally indicate positive outcomes. Future research considerations are proposed."

233. Gupta, S. and M.S. Gottlieb, "Treatment of the Acquired Immune Deficiency Syndrome." Journal of Clinical Immunology, 1986; 6 (3): 183-93.

The article surveys prevention and treatment modalities for AIDS and AIDS-related complex that result from infection by the human T-lymphotrophic virus strain III/lymphadenopathy-associated virus (HTLV-III/LAV). Four major strategies are discussed: immunotherapy, antiviral therapies, immunorestorative engineering, and combination treatments. The article suggests that recombinant DNA technology is the only way through which the large amounts of virus-specific proteins necessary for an AIDS vaccine can be obtained and points out that . . . "several investigators have been successful in incorporating HTLV-III/LAV into yeast, bacteria, and mammalian cells." Antiviral therapies employ drugs to destroy the virus or suppress its effects on CD-4 lymphocytes, thereby allowing the body to regenerate its immune functions. Among the drugs discussed in the article are Suramin, Foscarnet, and AZT (all inhibitors of HTLV-III/LAV "reverse transcriptase activity"), Antimoniotungstate, and Ribavirin. Immunorestorative engineering may be cellular, biomolecular, or pharmacologic. Cellular engineering technologies discussed in the article are transplantation of bone marrow in patients with acute leukemias and aplastic anemia, lymphocyte transfusion, and thymus transplantation alone or in conjunction with bone marrow transplantation. Variable results have been obtained with AIDS-related biomolecular engineering, which employs alpha- and gamma-interferons, interleukin-2, thymic hormone, leukocyte transfer factor, gamma-globulin, and plasmapheresis in patient treatment. Pharmacologic engineering using isoprinosine and imuthiol has shown some positive immunlogic effects in vitro, suggesting a need for larger scale studies with these compounds as well as with enkephalins. Finally, it is suggested that combination treatments would be necessary to treat patients with fully developed AIDS because "single-agent therapies" will not be enough. Among the combinations mentioned for testing were antiviral treatments with bone marrow transplantation, antiviral agents with interferons or interleukin-2, and pharmacological immunomodulators with antiviral agents.

234. Jackson, M.M., S.A. Healy, R.C. Straube et al., "The AIDS Epidemic: Dilemmas Facing Nurse Managers." Nursing Economics, May-June 1986; 4 (3): 109-16.

This article distinguishes the facts from the myths about AIDS and describes how the University of California San Diego Medical Center (UCSDMC) has responded to the AIDS crisis. Basic questions are presented and addressed: What is AIDS? How is AIDS transmitted? Who is at risk of contracting AIDS? How can nurses protect themselves? What is the prognosis? How can AIDS be prevented? The UCSDMC had an average daily census of patients with AIDS or AIDS-related complex (ARC) of 5 to 6, with as many as 12 patients on some days. The number is increasing steadily. In anticipation of the continuing increase in numbers of patients with AIDS, UCSDMC established an internal task force to address several substantive issues such as space allocation for inpatients; cost of care; patient acuity; outpatient clinic; AIDS clinical rounds; psychological support needs; educational needs; development of guidelines; the research implications for the medical center; reimbursement; long-term care needs; home care needs; and liaison with other community hospitals. The information is provided to help other nurse managers who may confront similar problems. A case history is included.

235. Kaplan, L.D., C.B. Wofsy and P.A. Volberding, "Treatment of Patients With Acquired Immunodeficiency Syndrome and Associated Manifestations." Journal of the American Medical Association, March 13, 1987; 257 (10): 1367-74.

This review of the literature focuses both on treatment of the disease manifestations and on more recent investigations into the use of immunomodulators and antiviral agents. "Treatment of AIDS is multidisciplinary and often involves input from a number of medical subspecialties. Treatment of opportunistic infections and malignancies in AIDS is largely palliative in that these treatments do not reverse the underlying immunodeficiency. Investigational approaches to the treatment of this syndrome withimmunomodulators and antiviral agents are currently being investigated with the hope that these agents, either alone or in combination, will be active against this devastating disease."

236. Kelly, J.A., J.S. St. Lawrence, S. Smith Jr. et al., "Stigmatization of AIDS Patients by Physicians." American Journal of Public Health, July 1987; 77 (7): 789-91.

"A randomly selected sample of physicians in three large cities was asked to read one of four vignettes describing a patient. They then completed a set of objective attitude measures eliciting their reactions to the patient described in the vignette. The vignettes were identical except that the patient's illness was identified as either AIDS or leukemia and the patient's sexual preference as either heterosexual or homosexual. Harsh attitude judgments were associated with the AIDS portrayals, as well as much less willingness to interact even in routine conversation when the patient's illness was identified as AIDS. Increasing numbers of AIDS patients will be seeking medical attention from physicians in all areas of the country and it will be important for health care professionals to develop programs which counter unreasonable stigma and prejudicial attitudes that may be associated with this illness."

237. Klug, R.M., "Children with AIDS." American Journal of Nursing, October 1986; 86 (10): 1126-32.

Attitudes toward and care of children with AIDS are discussed. As the number of children with AIDS increases, so does the need for nurses to provide rational public health education to their communities as well as compassionate care to children with AIDS and their families. Exposure, disease transmission, and diagnosis are described, followed by a detailed description of the chronic problems of the AIDS child: lactose intolerance, malnutrition, oral lesions, diarrhea, fever, respiratory infections, hypotonia, hypertonia, and pain. Coming to grips with the diagnosis of AIDS involves an evolutionary process for the family. Uncertainty and ambiguity about outcome add to the stress of the family. Public health agencies are in a position to be instrumental in providing information to the school systems; until the stigma surrounding AIDS is reduced, public education will remain an unresolved problem.

238. Lewis, C.E., H.E. Freeman, and C.R. Corey, "AIDS-Related Competence of California's Primary Care Physicians." American Journal of Public Health, July 1987; 77 (7): 795-99.

"A telephone survey of a random sample of primary care physicians practicing throughout the State of California [was conducted] to determine their AIDS-related experiences and competencies. Interviews were completed early in 1986 with 1,000 family and general practitioners and internists, 60 percent of those eligible to [participate]. Data on practice experiences reflect the increased incidence of AIDS . . . in Los Angeles and San Francisco. [Among practitioners in rural areas, 17 percent evaluated possible cases and 50 percent counseled patients at risk, which] indicated the generalized nature of the problem. Compared to similar data obtained in 1984, levels of competency in diagnosing and counseling persons with AIDS-related disorders increased in Los Angeles. However, on a statewide basis, a majority of those interviewed lack the AIDS-related knowledge and skills required to carry out their roles in dealing with AIDS. Competency was associated with physicians' personal and professional characteristics and their level of discomfort in dealing with homosexuals."

239. Lutz, S., "Hospices Seen as Alternative for AIDS Care, But Executives Fear Possible Ramifications." Modern Healthcare, April 24, 1987: 60-62.

"More hospices are being formed, and hospitals are viewing the organizations as a way to provide cheaper care for patients with terminal cases of AIDS. However, as hospices serve more AIDS patients, hospice executives worry about the potential impact on reimbursement, fundraising efforts, and volunteers. . . . Hospices provide physical and psychological comfort for people who have terminal illnesses and six months or less to live. Patients often waive rights to curative treatments. About 80 percent of hospice care is provided in patients' homes. Cost-containment pressures of Medicare's prospective pricing system are causing hospitals to transfer terminally ill patients to hospices and to form hospices themselves. . . . Currently, Medicare pays only 1 percent of the cost of care for all AIDS patients in the United States. . . . [It is suggested that] the financial problems of the hospice industry are misleading because many hospices aren't being run like businesses."

240. Mays, V.M. and S.D. Cochran, "Acquired Immunodeficiency Syndrome and Black Americans: Special Psychosocial Issues." Public Health Reports, March-April 1987; 102 (2): 224-31.

"Approximately 25 percent of persons diagnosed with AIDS have been black.... Three areas of concern when focusing on AIDS in the black population [are examined in this paper]: differences from whites in patterns of transmission of the infection, cultural factors that may affect health education efforts, and ethnically relevant issues in the provision of medical care to black persons with AIDS. Recognition of these differences is important in developing appropriate AIDS-related services for the black population. First, the epidemiologic pattern of infection in the black population differs from whites. . . . Currently it is estimated that [blacks are] infected with the HTLV-III/LAV virus at a rate estimated to be three times that of whites. In addition, epidemiologic patterns of viral transmission in the black community suggest a greater incursion into the heterosexual population. Second, educational interventions designed to slow the rate of infection need to be sensitive to cultural and behavioral differences between blacks and whites who are at increased risk for acquiring or transmitting an HTLV/LAV infection. . . . Third, in caring for black AIDS patients there are psychological, sociocultural, and medical care issues that are relevant. . . . Recommendations for research and health education efforts in the black community are presented."

241. Nelson, W., "Clinical Management of AIDS Patients." California Nurse, May 1986; 82 (4): 10-12.

This special issue presents an in-depth discussion of the nursing requirements of AIDS patients. Working with AIDS patients requires the best art and skill nursing has to offer. Nurses have the tools; they just need to know which ones to use. Fatigue, malaise, pain, drug therapy, and side effects are discussed in light of the nurse's ability to bring comfort to the patient. Many patients apparently know the outcome of AIDS.

242. Public Health Service, Centers for Disease Control, "Education and Foster Care of Children Infected with Human T-Lymphotrophic Virus Type III/Lymphadenopathy Associated Virus." Morbidity and Mortality Weekly Report, August 30, 1985; 34 (34): 517-21.

This paper presents legal and confidentiality issues, assesses transmission risks, and makes recommendations for forming guidelines for the education and foster care of children infected with human T-lymphotropic virus type III/lymphadenopathy associated virus (HTLV-III/LAV). The 11 recommendations--which were developed by the Centers for Disease Control (CDC) in consultation with epidemiologists, health care professionals, educators, and other child care experts--apply to all HTLV-III/LAV-infected children even if they are asymptomatic or do not meet the case definition of AIDS. (The case definition for AIDS surveillance of children is included in the article.) The recommendations point out that education and care decisions for these children ... "should be based on the behavior, neurologic development, and physical condition of the child and the expected type of interaction with others in that setting. ... For most infected school-aged children, the benefits of an unrestricted setting would outweigh the risks of their acquired potentially harmful infections in the setting and the apparent nonexistent risk of transmission of HTLV-III/LAV." The recommendations also advocate that all schools and day care facilities adopt routine procedures for handling blood and body fluids and that persons involved in caring for and educating HTLV-III/LAV-infected children maintain confidential records to protect the children's privacy. Mandatory screening as a condition for school entry was seen as "not warranted based on available data."

243. Quaggin, A., "Home Care of AIDS Patients Will Remain Rare, Conference Told." Canadian Medical Association Journal, April 15, 1987; 136: 867.

"Home care of AIDS patients will be more common in the future, but the lack of social supports and the difficulties of care mean it won't increase 'astronomically.'" It is expected that the number of AIDS patients to receive home care will remain small. A major problem of such care is isolation. In these cases, hospices offer an alternative type of community-based care."

244. Richardson, J.L., T. Lochner, K. McGuigan et al., "Physician Attitudes and Experience Regarding the Care of Patients with Acquired Immunodeficiency Syndrome (AIDS) and Related Disorders (ARC)." Medical Care, August 1987; 25 (8): 675-85.

"The number of patients with AIDS continues to increase. These patients require medical care from physicians who are well trained and who are willing to provide that care. In 1985, . . . a survey [was done] of 314 heterosexual and homosexual physicians in Los Angeles County to determine their willingness and perceived ability to care for patients with AIDS. This survey indicates that most physicians believe that special clinics staffed by physicians who have a particular expertise in caring for AIDS patients should be established. Many of the physicians surveyed indicated that concerns about the risk of contagion with AIDS is a deterrent to treating AIDS patients. Current evidence indicates this concern is unfounded. Both heterosexual and homosexual physicians indicated a lack of medical knowledge and experience regarding the opportunistic infections and cancers that are associated with AIDS, although many physicians in both groups expressed a desire to receive more training in this regard. [The] survey indicates that there is a definite need for more clinically based training opportunities for physicians who would like to provide care for AIDS patients. If such training were to become available, it is likely that sufficient numbers of physicians would be willing to care for AIDS patients."

245. Schietinger, H., "A Home Care Plan for AIDS." American Journal of Nursing, September 1986; 86 (9): 1021-28.

While rapid physical changes in AIDS patients can make frequent hospital stays necessary, usually the bulk of care is provided to people with AIDS outside the hospital. AIDS presents a continuum of disability including acute illness, chronic illness, and terminal illness. Hospice care gives the person with AIDS access to an around-the-clock on-call nurse and usually to more intensive social services, emotional support, and nursing visits. Hospice home care agencies are by nature designed to be more involved in the home situation than other home care agencies. Home care needs run the gamut from homemaker assistance to intensive physical care, and planning the amount of care and type of symptom management needed requires identification of the patient's level of dependence and physical condition. Judicious planning and some informed juggling of resources can tip the scales in favor of the person struggling to live his life in peace and dignity.

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246. Shepherd, F.A., M.M. Fanning, R. Duperval et al., "A Guide to the Investigation and Treatment of Patients with AIDS and AIDS-related Disorders." Canadian Medical Association Journal, May 1, 1986; 134 (1): 999-1008.

AIDS has become a major public health problem in Canada and elsewhere. This paper presents a detailed guide to the diagnosis and treatment of AIDS, AIDS-related complex, and the other specific AIDS related diseases, such as P. carinii pneumonia, toxoplasmosis, and diarrhea. "To ensure uniformity of reporting, the Centers for Disease Control (CDC) has issued a definition of AIDS that require[s] clinical confirmation of an AIDS-associated disease, which would in turn lead to a diagnosis of [acquired] immune deficiency." Investigation of patients suspected of having AIDS or AIDS-related complex (ARC) requires a detailed screening history to obtain background epidemiologic information and to elicit symptoms that may be suggestive of AIDS or ARC.

247. Shine, D., "Diagnosis and Management of Acquired Immune Deficiency Syndrome in Intravenous Drug Users." Advances in Alcohol and Substance Abuse, Fall 1985-Winter 1986; 5 (1-2): 25-34.

"Acquired immune deficiency syndrome (AIDS) is a clinical entity that is part of a spectrum of immune dysfunction found in specific high risk groups, among them intravenous (IV) drug users. In drug users, AIDS almost always presents as an opportunistic infection, usually Pneumocystis carinii. The leading etiologic hypothesis is of a viral agent . . . acting on a previously immunocompromised host. Recent research at hospitals affiliated with the Albert Einstein College of Medicine, [in the Bronx, New York,] where an unusually large proportion of AIDS patients are drug users, is described. Suggestions are advanced for the management of IV drug users with immune dysfunction."

248. Steinbrook, R., B. Lo, J. Moulton et al., "Preferences of Homosexual Men with AIDS for Life-Sustaining Treatment." New England Journal of Medicine, February 13, 1986; 314 (7): 457-60.

Homosexual male outpatients with AIDS (n=118) were surveyed in order to answer these questions: (1) Had they thought about life-sustaining treatment? (2) What were their preferences about life-sustaining treatment? (3) How did they react to thinking about life-sustaining treatment? (4) What were their preferences for discussing such treatment with physicians? and (5) Were patients providing advance directives to guide care? Patients had ambivalent but generally positive reactions to discussing life-sustaining treatment. "[The] study suggests that most patients with this illness have thought about life-sustaining treatment, have preferences about their care, and want to discuss life-sustaining treatment with their physicians. . . . [It is suggested] that physicians who care for patients with AIDS and other serious chronic illnesses should take an active role in educating patients about life-sustaining treatment and inviting them to provide advance directives."

249. Traska, M.R., "No Home Means No Home Care for AIDS Patients." Hospitals, January 5, 1986; 60 (1): 69-70.

"Health professionals caring for AIDS patients say that most cases could be treated appropriately and cost-effectively on a noninpatient basis. Hospice and home care programs are important alternatives, . . . but providing alternate care to AIDS patients is almost impossible when those patients are homeless." There are ways to deal with homeless AIDS patients ready for nonhospital care, but they aren't easy. However, it is noted that finding housing is bound to cost less than absorbing the cost of acute care.

250. Traska, M.R., "Proper AIDS Care Demands Better Discharge Planning." Hospitals, January 5, 1986; 60 (1): 70-71.

"The way to ensure best use of nonhospital services and to reduce lengths of stay for AIDS patients is through proper discharge planning. . . . The problem is that few hospitals do it effectively. . . . Appropriate discharge planning becomes the most important factor for treating AIDS victims. . . . Patients may need nutritional counseling and housekeeping help as well as social services. . . . [It is suggested that] the biggest problem with discharge planning may be the conflicting information being given to AIDS patients and their families."

251. Wolff, P.H., and M. Colletti, "AIDS: Getting Past the Diagnosis and on to Discharge Planning." Critical Care Nurse, July-August 1986; 6 (4): 76-81.

A detailed guide for discharge planning for AIDS patients is presented in chart form. The plan outlines specific goals and nursing interventions to help the AIDS patient. "Nurses are the vital link for hospitals and patients and the resource for patient education and discharge planning. Discharge planning should be initiated in the critical care area; however, it is a responsibility shared with staff on other units who provide care for the patient. . . . Because each patient is unique, education should be individualized."

Additional References

252. Gruson, L., "AIDS Fear Spawns Ethics Debate As Some Doctors Withhold Care." New York Times, July 11, 1987.

253. Specter, M., "Test-Drug Proposal Scaled Back: Persons Near Death To Have Freer Access." Washington Post, May 22, 1987.

254. Staff, "Physicians Increasingly Worried About AIDS Transmission Risk, as Residents Fret About AIDS Exposure." Medical World News, August 24, 1987; 28 (16): 12-13.

255. Dan, B.B., "The Years of Living Dangerously." Journal of the American Medical Association, March 13, 1987; 257 (10): 1376.

"One major thrust of the battle plan for the war on AIDS revolves around preventing the transmission of the causative agent, the human immunodeficiency virus, and especially preventing its sexual transmission. It has been suggested that . . . it is now a great time to practice sexual monogamy . . . . Preventing the further spread of this epidemic makes each person responsible for everyone; we must take care of each other if we are to take care of ourselves."

256. Darrow, W.W., "A Framework for Preventing AIDS." American Journal of Public Health, July 1987; 77 (7): 778-79.

It is suggested that the "major part of the solution to AIDS depends on the rapid dissemination of accurate information . . . Recent studies suggest that some health care providers and many of the general public still need to be convinced that AIDS is caused by a virus that is not casually transmitted. There seems to be no end to the material being generated to educate the public about the dimensions and severity of AIDS. . . . Yet many important messages are either not being received or acted on because time is limited for the practitioner to listen, absorb, and assimilate all the information available. More effective responses to the AIDS crisis must penetrate these barriers."

257. Dowdle, W.R., "AIDS: What Is It? Who Is At Risk? How Can It Be Prevented?" Public Welfare, Summer 1986; 44 (3): 14-19.

This article describes AIDS: Who is at risk, the virus that causes it and its effects, the means of transmission, treatments and vaccines, how to avoid getting AIDS, and what a person with positive results on the HTLV-III antibody test should do. "Preventive measures will require changes in personal behavior for many Americans. Studies conducted among homosexual and bisexual men and intravenous drug users . . . provide encouraging indications that in these groups such changes are indeed beginning to occur. Prevention is [the] best current protection from AIDS and from infection with the virus that causes it."

258. Francis, D.P. and J. Chin, "The Prevention of Acquired Immunodeficiency Syndrome in the United States: An Objective Strategy for Medicine, Public Health, Business, and the Community." Journal of the American Medical Association, March 13, 1987; 257 (10): 1357-66.

"Human immunodeficiency virus (HIV) is one of the most virulent infectious agents ever encountered. This virus, estimated to kill up to a half of those infected, has spread to more than 1 million Americans. There is no safe and effective treatment. Nor is there a vaccine." From [the authors'] understanding of HIV transmission, "further spread of the virus can be stopped by the use of various techniques. The combined use of education-motivation-skill building, serologic screening, and contact tracing/notification could eliminate or substantially reduce transmission. To accomplish this reduction an immense concerted effort by physicians, public health practitioners, [businesses], and community organizations is required to get across the simple prevention messages. Those messages are: (1) Any sexual intercourse (outside of mutually monogamous or HIV antibody-negative relationships) must be protected with a condom. (2) Do not share unsterile needles or syringes. (3) All women who may have been exposed should seek HIV-antibody testing before becoming pregnant and, if positive, avoid pregnancy. Only through a concerted, vigorous, and sustained prevention program that deals frankly with this problem will those individuals at risk be reached and motivated to take personal responsibility to protect themselves. Without such an effort, [AIDS] will continue to kill ever-increasing numbers of Americans."

259. Goedert, J.J., "What is Safe Sex?" New England Journal of Medicine, May 21, 1987; 316 (21): 1339-42.

"Because of the lethality of the HIV epidemic, rational and scientifically defined standards of sex that preclude the spread of sexually transmitted diseases are required. In the context of an HIV-antibody test that has been documented to be extremely sensitive, [specific] standards for truly safe sex can be defined. HIV testing can be used as a powerful tool for defining a series of standards for sexual partners that eliminates, with reasonable certainty, the further spread of HIV. Such standards provide a defined benchmark for future research aimed at evaluating the effectiveness of public health measures in arresting the spread of the virus. The fact that at least 10 million American blood donors and some 2 million Americans applying for or in the armed forces have been tested demonstrates that the adverse consequences of testing can be limited. [It is suggested that] now is the time to minimize the fear and eliminate the risk of transmitting HIV to loved ones by urging widespread voluntary testing of sexually active adults and by developing standards for safe sex."

260. Greene, W.H., "Infection-Control Policies and AIDS" [Letter with reply by J.L. Gerberding and M.A. Sande]. New England Journal of Medicine, June 4, 1987; 316 (23): 1479-80.

This letter to the editor welcomes any suggestions for infection-control procedures and what might be done to ascertain that they are strictly enforced and periodically monitored to ensure compliance. In the end, ensuring compliance is the proper function of the hospital department with which a given staff member is identified. How to achieve that goal, both in general and for patients with AIDS in particular, remains uncertain.

The reply to this letter recommends a policy that emphasizes a strong commitment to the prevention of the nosocomial transmission of all these pathogens and proposes that precautions be taken in handling blood and body fluids from all patients, regardless of whether infection has been diagnosed.

261. Holmes, P., "Abolishing the Myths about AIDS." Nursing Times, December 5, 1984; 80 (49): 19.

This article, addressed primarily to those caring for AIDS patients, suggests that behind the headlines of AIDS are real people with real problems and that the newspaper horror stories do little to foster the sensible and humane treatment of AIDS victims by the public or by nurses. The importance of psycho-social support is emphasized as is a balanced view of AIDS in relation to nursing practice.

262. Kawata, P., "Stopping the AIDS Epidemic: The News About AIDS May Not Be Good, But. . . " Public Welfare, Summer 1986; 44 (3): 35.

This very short article stresses that the efforts of various groups to develop education programs to help in stopping the "transmission of the AIDS virus has called forth a wide variety of organizations to form unique partnerships . . . The campaign[s] include[s] television and radio public service announcements, newspaper and periodical adverisements, billboard advertisements, and an AIDS information hotline. The goal of the efforts is to reach the greatest number of people with accurate, up-to-date information about AIDS in order to counter widespread, irrational fear of the disease."

263. Martin, J.L., "The Impact of AIDS on Gay Male Sexual Behavior Patterns in New York City." American Journal of Public Health, May 1987; 77 (5): 578-81.

A sample of 745 gay men, ages 20 to 65, were interviewed in 1985 as part of an effort to determine the impact of the AIDS epidemic on the non-ill but at-risk community. Measured in terms of the number of different sexual partners, sexual activity [was reported to have declined by 78 percent since hearing about AIDS]. The frequency of sexual episodes involving the exchange of body fluids and mucous membrane contact [declined by 70 percent], and condom use during anal intercourse increased from 1.5 to 20 percent. Abstinence from gay sex did not change over time.

264. McLaughlin, N., "Warning on Blood Transfusions and AIDS Evoked Less Public Fear than Expected." Modern Healthcare, May 8, 1987: 86.

"A recent government warning on blood transfusions and the danger of [AIDS] has failed to produce the onslaught of worried ex-patients that some hospital executives had expected. The brunt of any public fear caused by the warning from the Centers for Disease Control [CDC] seems to have been borne by state and local public health authorities and AIDS testing centers." It is suggested that the CDC may have unduly alarmed many people.

265. Mills, M., C.B. Wofsy, and J. Mills, "The Acquired Immunodeficiency Syndrome: Infection Control and Public Health Law." New England Journal of Medicine, April 3, 1986; 314 (14): 931-36.

Infection control of AIDS and the public health law are discussed. "The legality of measures to control the spread of infectious diseases is determined under principles of constitutional law that require the individual's interest in liberty and privacy to be balanced against the public's interest in health and safety . . . Legal principles applicable to patients with AIDS should therefore apply equally to other persons if their infectiousness is confirmed by the best available testing methods. [Included in the responsibilities of physicians and patients are the duty to report AIDS, the patient's right to confidentiality, the patient's right to full information, the patient's knowledge of legal risks, and the physician's responsibility for recalcitrant patients.] [Where necessary,] public health officials have broad powers to conduct epidemiologic investigations of infectious diseases for well-defined purposes . . . Because AIDS is fatal and incurable, [it is suggested that] the courts will defer to the judgment of the medical community and would uphold severe measures if shown a medical consensus that the measures were necessary and effective."

266. O'Donnell, L. and C.R. O'Donnell, "Hospital Workers and AIDS: Effects of in-Service Education on Knowledge and Perceived Risks and Stresses." New York State Journal of Medicine, May 1987: 278-80.

"Hospital workers were surveyed in 1985 and again in 1986, after the institution of in-service training programs, regarding their knowledge [of] AIDS and their perceptions of the risks and stresses of AIDS patient care. The study found that in-service training was associated with reductions in workers' reported stress, perceived risks, and negative attitudes, and with improvements in knowledge and satisfaction with the quality of care provided."

267. Public Health Service, "Public Health Service Plan for the Prevention and Control of Acquired Immune Deficiency Syndrome (AIDS)." Public Health Reports, September-October 1985; 100 (5): 453-55.

"This document provides an outline for the key goals and objectives that must be met to achieve prevention and control of AIDS. The plan calls for action by federal agencies, state and local health departments, professional organizations, and volunteer groups. Many of the specific objectives cannot be expressed in measurable terms because of inadequate current information, but they are included . . . even though modification will be made as more data are generated."

268. Public Health Service, Surgeon General's Report on Acquired Immune Deficiency Syndrome. Washington, D.C., October 1986.

"This is a report from the Surgeon General of the [United States] Public Health Service to the people of the United States on AIDS. [AIDS] is an epidemic that has already killed thousands of people, mostly young, productive Americans. In addition to illness, disability, and death, AIDS has brought fear to the hearts of most Americans, fear of disease, and fear of the unknown. Initial reporting of AIDS occurred in the United States, but AIDS and the spread of the AIDS virus is an international problem. This report focuses on prevention that could be applied in all countries. [The report informs] about AIDS, how it is transmitted, the relative risks of infection, and how to prevent it. [It is suggested that for someone who is] participating in activities that could [cause exposure] to the AIDS virus, [the] report could [be lifesaving]".

269. Public Health Service, Centers for Disease Control, "Self-Reported Changes in Sexual Behavior Among Homosexual and Bisexual Men from the San Francisco City Clinic Cohort." Morbidity and Mortality Weekly Report, April 3, 1987; 36 (12): 187-89.

"From January 1978 through April 1980, approximately 6,700 homosexual and bisexual men attending a clinic for sexually transmitted diseases in San Francisco were enrolled in studies of the prevalence and incidence of Hepatitis B virus infection . . . From December 1983 through December 1985, a random sample from this study group was asked to participate in studies of [AIDS] by providing further information about their sexual behaviors. Study results show that homosexual and bisexual men in San Francisco have considerably reduced both their number of nonsteady sexual partners and their participation in specific sexual practices associated with increased risk of human immunodeficiency virus . . . infection, especially receptive anal intercourse."

270. Rhein, R. Jr., L. Therrien, J.O. Hamilton et al., "Freeing Hemophiliacs from the Risk of AIDS." Business Week, April 13, 1987: 38.

"If a survey by the National Hemophilia Foundation is correct, [approximately] two-thirds of the nation's 20,000 hemophiliacs have already been infected with the AIDS virus through contaminated Factor VIII produced by companies that extract useful substances from human blood . . . [While] screening of blood . . . [has] prevented any new infections from occurring since mid-1985 . . . the promise of clotting factor produced by recombinant DNA technology may finally be realized."

271. Ryan, C., "AIDS in the Workplace: How to Reach Out to Those Among Us." Public Welfare, Summer 1986; 44 (3): 29-33.

Responding to employees with AIDS is the subject of this article. "Because employees may respond to their AIDS diagnosis or to a related condition in a variety of ways, managers must be educated about the issues, medical facts, and rights of the worker with AIDS. . . . According to workplace guidelines issued last November by the Centers for Disease Control, workers known to be infected with the HTLV-III virus should not be restricted from work solely based on this finding." Questions that therefore need to be answered and are discussed in this report include routine screening, education of staff, defusing staff resistance, setting policy, legal issues, and responding to employees with AIDS.

272. Winkelstein, W. Jr., M. Samuel, N.S. Padian *et al.*, "The San Francisco Men's Health Study: III. Reduction in Human Immunodeficiency Virus Transmission Among Homosexual/Bisexual Men, 1982-86." *American Journal of Public Health*, June 1987, 76 (9): 685-89.

"The prevalence and incidence of infection by the human immunodeficiency virus (HIV) has been under study in a cohort of 1,034 single men recruited by area probability sampling from a six-square kilometer area of San Francisco where the epidemic of [AIDS] has been most severe. Prevalence of infection among homosexual/bisexual study subjects increased from an estimated 22.8 percent during the last half of 1982 to 48.6 percent during the period July through December 1984. During three subsequent 6-month periods, prevalence remained stable at approximately 50 percent. Annual infection rates, measured by seroconversion among seronegative study subjects, decreased from an estimated 18.4 percent per year from 1982 to 1984 to 5.4 and 3.1 percent during the first and second halves of 1985 to 4.2 percent during the first six months of 1986. These declines were associated with reductions of 60 percent or more in the prevalence of high-risk sexual practices associated with both acquiring and disseminating infection by the human immunodeficiency virus."

Additional References

273. Boodman, S.G., "AIDS Message Misses Many Blacks, Hispanics." *Washington Post*, May 31, 1987.

274. Boodman, S.G. and S. Okie, "Aggressive Prevention Efforts Proliferate: WHO Official Calls for World Cooperation, Warning There Are No Geographic 'Safe Zones'." *Washington Post*, June 5, 1987.

275. Davidson, J., "U.S. Is Considering Mailing AIDS Data To All Households." *Wall Street Journal*, April 8, 1987.

276. Gross, J., "New York Officials Brace for Conflict on Explicit AIDS Ads." *New York Times*, May 11, 1987.

277. Gruson, L., "Koop, at Workshop on Children and AIDS, Stresses Early Education." *New York Times*, April 7, 1987.

Prevention

278. Lynn, F., "Bush Calls for Spending On AIDS and Education." New York Times, May 22, 1987.

279. McCarthy, C., "AIDS: Waves of Panic." New York Times, June 13, 1987.

280. Pear, R., "AIDS Feared as Occupational Hazard." New York Times, May 24, 1987.

281. Randolph, E., "AIDS Reporters' Challenge: To Educate, Not Panic, the Public." Washington Post, June 5, 1987.

282. Rimer, S., "AIDS Precautions Taken by Dentists." New York Times, June 6, 1987.

283. Specter, M., "Hospitals' AIDS Safeguards Debated: Proposal on Testing Patients Raises Fears of 'Two Standards of Care'." Washington Post, July 28, 1987.

284. Specter, M., "Many Health-Care Workers Doubt Value of Proposed AIDS Guidelines." Washington Post, July 29, 1987.

285. Staff, "Few Teens Guarding Against AIDS." FDA Consumer, July-August 1987; 21 (6): 3.

286. Staff, "Fight AIDS Now, With Methadone" (Editorial). New York Times, June 10, 1987.

287. Sullivan, R., "Private Doctors Urged to Battle Spread of AIDS: New York Health Chief Requests More Testing." New York Times, May 27, 1987.

PROJECTIONS AND TRENDS

288. Barnes, D.M., "Grim Projections for AIDS Epidemic." Science, June 27, 1986; 232: 1589-90.

Projections for the AIDS epidemic are discussed. "During the first 5 years of the AIDS epidemic, approximately 35,000 people in the United States will have developed the disease. Over the next 5 years, the Public Health Service estimates that [approximately] 235,000 new cases will occur . . . [Uncertainties as to the numbers who] will go on to develop the disease . .. leave open the question of projected medical costs for AIDS . . . Another major question concerns who in the United States is likely to become infected with the virus during the next 5 years. [At a conference at the Coolfont resort in West Virginia, the Centers for Disease Control predicted that by 1991] the cumulative total will reach 201,000 to 311,000 cases [with 179,000 deaths] . . . [Medical costs were described as "staggering," rising in 1991 to between $8 and $16 billion. A new Public Health Services report stresses] the importance of massive education programs targeted at special populations, including children and teenagers, women, and minority groups, as well as the general population."

289. Chamberland, M.E., K.G. Castro, H.W. Haverkos et al. "Acquired Immunodeficiency Syndrome in the United States: An Analysis of Cases Outside High-Incidence Groups." Annals of Internal Medicine, 1984; 101 (5): 617-23.

"[From June 1, 1981, through January 31, 1984], 201 cases of [AIDS] were reported involving persons who could not be classified into a group identified to be at increased risk for this syndrome. Thirty-five had received transfusions of single-donor blood components in the 5 years preceding diagnosis of the syndrome and 30 were sexual partners of persons belonging to a high-risk group. Information was incomplete for most remaining patients, but because many of these patients were demographically similar to populations recognized to be at increased risk for the syndrome, previously identified risk factors may have been present but not reported for some of them. Additionally, a few persons who met the case definition for the syndrome probably had other reasons for their opportunistic disease and did not have [AIDS]. The slow emergence of AIDS in new populations is consistent with transmission mediated through sexual contact or parenteral exposure to blood.

290. Goldsmith, M.F., "More Heterosexual Spread of HTLV-III Seen." Journal of the American Medical Association, June 21, 1985; 253 (23): 3377-79.

Evidence has been presented that heterosexual transmission of AIDS is something to be reckoned with at this time. In New York City as of the start of 1985, it was reported that of the 2,997 AIDS cases in males, 27 occurred in heterosexual men with no recognized risk factors. Two of the 27 men were sexual partners of female intravenous

(IV) drug users and 12 reported having one or more sexual encounters with female prostitutes in the 5 years prior to the diagnosis of AIDS. In 17 of 41 cases reported at Walter Reed Army Hospital in Washington, D.C. there was no evidence of defined risk factors. Two of these 17 patients could not be associated with any possible risk factor at all. In 9 patients the most likely means of acquisition of HTLV-III infection was intercourse with female prostitutes. It is suggested that heterosexual activity may be an important factor in the transmission of AIDS and that female prostitutes could be an important human reservoir of HTLV-III among the heterosexual population.

291. Guinan, M.E. and A. Hardy, "Epidemiology of AIDS in Women in the United States: 1981 Through 1986." Journal of the American Medical Association, April 17, 1987; 257(15): 2039-42.

"An analysis of 1,819 cases of [AIDS] in women reported between 1981 and 1986 showed that the majority of women with AIDS were intravenous drug users. The second most common risk group was heterosexual contact with a person at risk for AIDS. The proportion of women with AIDS in this risk group increased significantly between 1982 and 1986, from 12 percent to 26 percent. This trend may prove to be a good marker for following trends in heterosexual transmission. Since the majority of childhood AIDS cases are a result of perinatal transmission from the mother, trends in AIDS cases in women may also predict future trends for AIDS in children."

292. Harris, J.E., "The AIDS Epidemic: Looking into the 1990s." Technology Review, July 1987; 90 (5): 58-64.

The available AIDS information is assembled and a prediction made about the course of the AIDS epidemic over the next 3 to 4 years. According to the author: "[T]he virus that causes AIDS has already infected approximately 900,000 individuals in this country. Barring major changes in sexual behavior and intravenous drug use, [approximately] 2.5 million people in the United States [can be expected] to be infected by early 1991. The infections will continue to arise from sexual intercourse and transfers of blood via contaminated needles, not from other personal contacts in the home, school, or workplace. Unless [a drug is found] that halts the progression from initial infection to full-blown AIDS, [it is estimated] that the toll of the epidemic will reach about 250,000 cases by early 1991. Since the disease has a long incubation period, most of the people who will contract the disease by that time are infected now. [The total number of AIDS cases will be large enough to place a severe burden on our health-care and insurance systems as well as society at large.]"

293. Jaffe, H.W., D.J. Bregman and R.M. Selik, "Acquired Immune Deficiency Syndrome in the United States: The First 1,000 Cases." Journal of Infectious Diseases, August 1983; 148 (2): 339-45.

Projections and Trends

"Between June 1981 and February 1983, the Centers for Disease Control (Atlanta) received reports of 1,000 patients living in the United States who met a surveillance definition for [AIDS]. Seventy-three percent of these patients were diagnosed after January 1, 1982. The 1,000 patients included 284 with Kaposi's sarcoma (KS), 497 with *Pneumocystis carinii* pneumonia (PCP), 83 with KS and PCP, and 136 with opportunistic infections other than PCP. The overall mortality has been 39.2 percent. Cases have been reported from 32 states and the District of Columbia; New York, California, New Jersey, and Florida account for 82.7 percent of the reports. All but 61 of the patients could be classified into one or more of the following groups: homosexual or bisexual men, intravenous drug abusers, Haitian natives, or patients with hemophilia. Epidemiologic trends in AIDS cases are consistent with the gradual extension of an infectious agent into new populations."

294. Joseph, S.C. (Commissioner of Health, New York City Department of Health), *AIDS in New York City: Report to the Mayor*, April 1987 -- Inter-Agency Task Force on AIDS.

Public health issues associated with AIDS in New York City are presented in this report. As of April 30, 1987, "almost 10,000 cases of AIDS have been reported and more than half of these people have died. AIDS is now the leading cause of death in New York City among men aged 25-44 and women aged 25-29. Hundreds of thousands of New Yorkers have been exposed to the human immunodeficiency virus. Many of these individuals are currently infected, but have few if any symptoms; others have symptoms which, although not yet full-blown AIDS, are disabling and require intensive health and social service intervention. By 1991, [it is projected] that New York City will have seen more than 40,000 cases of AIDS. [The report is submitted] on behalf of six city agencies which form the Interagency Task Force on AIDS: [Health and Hospitals Corporation; Human Resources Administration; Department of Health; Department of Mental Health, Mental Retardation, and Alcoholism Services; Commission on Human Rights; and the Board of Education.] [The report] describes the wide range of programs initiated in response to the AIDS crisis."

295. Kolata, G., "Mathematical Model Predicts AIDS Spread." Science, March 20, 1987; 235: 1464-65.

A mathematical model of the AIDS epidemic can be used to provide rough estimates of the length of time between infection with the AIDS virus and onset of actual disease. It will also suggest questions about the epidemic that can lead to a clearer picture of how AIDS will spread, particularly among heterosexuals. The model brings into sharp focus important unanswered questions about AIDS. For example, it is not known for certain how long people are infectious; it is not certain what fraction of those who are infected will eventually get AIDS; and it is unclear whether people who are infected but never get AIDS will be infectious for the rest of their sexually active lives. The model can be used to estimate combinations of parameters that by themselves may not be amendable to observation. The data on hand can also be used to estimate how difficult it might be to contain the AIDS epidemic. "In the end, [the] model raises more questions than it answers. But its importance lies in its new approach to the AIDS epidemic."

296. Kristal, A.R., "Record Linkage of AIDS Surveillance and Death Certificate Files: Changes in Premature Mortality Patterns in New York City." Proceedings of 1985 Public Health Conference on Records and Statistics, Department of Health and Human Services, DHHS Publication No. (PHS) 86-1214, Hyattsville, MD, 1985: 261-64.

"This paper describes the techniques and some results of linking records in the New York City [AIDS] surveillance registry with New York City death certificates. The purpose of this research is to better understand AIDS epidemiologically and to describe the impact of AIDS on mortality patterns in New York City . . . The impact of AIDS on patterns of premature mortality is profound. Among the two highest risk groups, gay men and intravenous drug users aged 15-64 in New York City, AIDS is the single leading cause of death and accounts for more than a third of all deaths. Even among groups not at high risk of AIDS . . . AIDS has become one of the leading causes of premature mortality. Accurate analysis of AIDS mortality is not feasible from AIDS surveillance or death certificates alone. Surveillance data underestimate both the number of AIDS cases and the number of cases reported that have died subsequently." [The approach here is to link all reported cases in the surveillance registry to their certificate of death.]

297. McIntyre, M., D.J. Barbour and J.G. Angle, "AIDS Update." Perspectives on Prevention, Spring 1987; 1 (3): 30-36.

This update of information on the AIDS epidemic includes sections on statistics education, vaccination, transmission, screening, treatment, and public policy and includes the following information: (1) statistically, the projected costs of AIDS treatment appear to be dropping; (2) AIDS educational programs are increasing nationally under the leadership of Surgeon General C. Everett Koop and worldwide, under a priority campaign of the World Health Organization; (3) teams in Zaire and France have been conducting human experiments to develop an AIDS vaccine, and researchers have reported that genetic engineering techniques are being used to develop a synthetic protein that causes goats to produce antibodies against the AIDS virus; (4) the AIDS screening program received a setback last November when Congress banned the Pentagon from using data from AIDS virus testing to discriminate against military personnel; and (5) in January, the Food and Drug Administration recommended that the drug AZT become the first commercially marketed treatment of AIDS.

298. Morgan, W.M. and J.W. Curran, "Acquired Immunodeficiency Syndrome: Current and Future Trends." Public Health Reports, September-October 1986; 101 (5): 459-65.

The demographic projections that serve as the basis for the "Public Health Service Plan for the Prevention and Control of AIDS and the AIDS Virus" are described in detail. The empirical model projects that 74,000 patients will be diagnosed in 1991 alone. The number of cases has increased steadily, but the doubling times continue to lengthen, indicating that the rate of increase is not exponential. Ninety-four percent of the total reported adult cases can be placed in patient groups that suggest a possible means of disease acquisition, but the geographic distribution of diagnosed adult AIDS cases has changed markedly from 1983 to 1986, with the proportion of cases outside New York City and San Francisco increasing significantly. The distribution of pediatric cases by the patient's age, race, and geographic region has not changed significantly from 1983 to 1986. These projections are conservative since they are based only on cases reported to the Centers for Disease Control (CDC). A review of death certificates over a 3-month period in four different metropolitan areas in the United States suggested that an additional 10 percent of diagnosed cases of AIDS are not reported to the CDC.

299. New York City Department of Health AIDS Surveillance, "The AIDS Epidemic in New York City, 1981-1984." American Journal of Epidemiology, June 1986; 123 (6): 1013-25.

"Since the epidemic of AIDS was first recognized in 1981, New York City has had more cases and a higher incidence than any other city in the world. As of July 31, 1985, 4,133 cases had been reported to the New York City Department of Health, a cumulative incidence of 59 cases per 100,000. The incidence of disease continues to increase with each year of the epidemic, with 28 percent more cases diagnosed and reported in the first 6 months of 1985 than in a similar period of 1984 . . . Surveillance data of the New York City Department of Health [were examined] for 3,145 AIDS cases for the period 1981-1984 . . . As in the rest of the United States, the groups most affected include homosexual or bisexual men who do not use intravenous (IV) drugs . . . and male and female IV drug users . . . The percentage of cases represented by [IV] drug users in New York City is higher than in the United States as a whole and 79 percent of all intravenous users with AIDS have had residence in New York City. Major changes observed over the period of 1981 to 1984 include a decrease in the proportion of homosexual and bisexual men . . . an increase in the proportion of IV drug users . . . and the appearance of cases in three new groups at risk: children of parents in risk groups, transfusion recipients, and female sexual contacts of men in risk groups."

Projections and Trends

300. Norman, C., "AIDS Trends: Projections from Limited Data." *Science*, November 29, 1985; 230 (4929): 1018, 1020-21.

The uncertainty of AIDS statistics is discussed. This "uncertainty stems from inevitable deficiencies in the data from which extrapolations are being made. It also reflect lack of knowledge of how effectively the retrovirus that is widely believed to be the prime cause of AIDS is transmitted sexually from women to men. And it reflects the lack of firm answers to what may be the most troubling questions of all: What proportion of people infected with the virus will go on to develop disease symptoms?. . . The central difficulty in predicting the likely course of the AIDS epidemic is the long latency period between infection and the onset of symptoms. [This long latency period] complicates efforts to control the epidemic . . . [and] a clearer picture of the likely spread of the disease will only emerge by tracking the spread of the virus rather than AIDS itself . . . Although the pattern of diagnosed cases shows little heterosexual spread of AIDS, far less is known about the spread of the virus itself . . . If AIDS is not spreading widely into the heterosexual community in the United States, it will be difficult to equate this with what appears to be happening in Africa . . . [It is suggested] that the potential for heterosexual transmission is clear [and that the virus has been underestimated before.]"

301. Public Health Service, "Coolfont Report: A PHS Plan for Prevention and Control of AIDS and the AIDS Virus." *Public Health Reports*, July-August 1986; 101 (4): 341-8.

"This document provides a framework for the steps that must be taken in five broad areas -- pathogenesis and clinical manifestations, therapeutics, vaccines, public health control measures, and patient care and health care needs -- to achieve prevention and control of AIDS. The current plan is based on estimated changes in the demographics of AIDS through 1991. It calls for concerted action by federal agencies, state and local health departments, professional organizations, and volunteer groups . . . The Public Health Service (PHS) convened a meeting at the Coolfont Conference Center in Berkeley Springs, West Virginia, June 4-6, 1986. Eighty-five experts in various aspects of AIDS, including clinicians, epidemiologists, public health policy makers, and basic research scientists were invited to review and modify the [Public Health Services' 1985 comprehensive plan for the prevention and control of AIDS and the AIDS virus. This document] is the result of that meeting. It represents a renewed commitment by the PHS to prevent and control AIDS infection and its sequelae.

302. Public Health Service, Centers for Disease Control, "Acquired Immunodeficiency Syndrome (AIDS) Among Blacks and Hispanics -- United States." *Morbidity and Mortality Weekly Report*, October 24, 1986; 35 (42): 655-66.

"In the period June 1, 1981, to September 8, 1986, physicians and health departments in the United States notified the Centers for Disease Control (CDC) of 24,576 patients meeting the AIDS case definition for national reporting. Of these, 6,192 (25 percent) were black and 3,488 (14 percent) were Hispanic, whereas these groups represent only 12 percent and 6 percent, respectively, of the United States population. The proportion of cases by racial/ethnic group has remained relatively constant over time, but the number of reported cases of AIDS among persons of all racial and ethnic backgrounds continues to rise . . . [It is noted that] additional health-education/risk-reduction projects are needed to actively involve minority communities in the accomplishment of overall community AIDS risk-reduction activities."

303. Public Health Service, Centers for Disease Control, "Human Immunodeficiency Virus Infection in Transfusion Recipients and Their Family Members." Morbidity and Mortality Weekly Report, March 20, 1987; 36 (10): 137-40.

The Centers for Disease Control (CDC) have received "a report of human immunodeficiency virus (HIV) infection among multiply transfused leukemia patients in New York City. In addition, there have been several reports that persons with transfusion-associated HIV infection have transmitted the virus to their sexual partners and newborn children. All infected transfusion recipients described in these reports had received blood or blood components before routine screening of donated blood for HIV antibody was begun in the spring of 1985." Mathematical projections from reported transfusion-associated AIDS cases estimate that approximately 12,000 people now living in the United States acquired a transfusion-associated HIV infection between 1978 and 1984.

304. Public Health Service, Centers for Disease Control, "Trends in Human Immunodeficiency Virus Infection Among Civilian Applicants for Military Service -- United States, October 1985 -- December 1986." Morbidity and Mortality Weekly Report, May 15, 1987; 36 (18): 273-76.

"Since October 1985, the United States Department of Defense has routinely tested civilian applicants for serologic evidence of infection with human immunodeficiency virus (HIV) as part of their preinduction medical evaluation. Results from the first 6 months of testing have been reported previously; results for the first 15 months provide the opportunity to observe trends of infection in this population. Between October 1985 and December 1986, 789,578 civilian applicants for military service were screened. Of these, 1,186 were confirmed as HIV-antibody positive by enzyme immunoassay and Western blot immunoelectrophoresis. During the 15-month observation period, the seroprevalence did not change significantly, either in the aggregate or when analyzed by age, sex, race and ethnicity, or geographic region. However, seroprevalence among white males showed a small but significant decline of 0.02/1,000 applicants tested per month."

305. Public Health Service, Centers for Disease Control, "Update: Acquired Immunodeficiency Syndrome -- United States" (through December 19, 1983). Morbidity and Mortality Weekly Report, January 6, 1984; 32 (52): 688-91.

As of December 19, 1983, physicians and health departments in the United States have reported a total of 3,000 patients who meet the surveillance definition for AIDS. A total of 1,283 (43 percent) of reported patients are known to have died; the proportion of patients with Karposi's sarcoma (KS) alone who have died (23 percent) is less than half that of other AIDS patients. Of the 3,000 patients, 90 percent have been between 20 and 49 years of age. Half of the 3,000 reported AIDS patients have been diagnosed since February 1983. Cases have been reported from 42 states, the District of Columbia, and Puerto Rico. Eighty-one percent of the patients were residents of New York, California, Florida, or New Jersey at the time of the onset of illness. Not included in the 3,000 case reports are 42 children under the age of 5 years who meet a provisional case definition for pediatric AIDS.

306. Public Health Service, Centers for Disease Control, "Update: Acquired Immunodeficiency Syndrome -- United States" (through January 13, 1986). Morbidity and Mortality Weekly Report, January 17, 1986; 35 (2): 17-21.

Between June 1, 1981 and January 13, 1986, physician and health departments in the United States notified the Centers for Disease Control (CDC) of 16,458 patients (16,227 adults and 231 children) meeting the AIDS case definition for national reporting. Of these, 8,361 (51 percent of the adults and 59 percent of the children) are reported to have died, including 71 percent of patients diagnosed before July 1984. The number of cases reported each 6-month period continues to increase, although not exponentially, as evidenced by the lengthening case-doubling times. Cases have been reported from all 50 states, the District of Columbia, and three U.S. territories.

307. Public Health Service, Centers for Disease Control, "Update: Acquired Immunodeficiency Syndrome -- United States" (through December 8, 1986). Morbidity and Mortality Weekly Report, December 12, 1986; 35 (49): 757-66.

As of December 8, 1986, physicians and health departments in the United States had reported 28,098 patients (27,704 adults and 394 children) meeting the AIDS case definition for national reporting. Of these patients, 15,757 (56 percent of adults and 61 percent of children) are known to have died, including over 79 percent of those patients diagnosed before January 1985. Since the initial reports of AIDS in early 1981, the number of cases reported for each 6-month period continues to increase. However, the increases are not exponential, as evidenced by the lengthening period of time required to double the number of cases. During the past 3 months, an average of 58 AIDS cases have been reported to CDC daily. This compares with 35 cases reported during the same period in 1985, 20 cases in 1984, and 10 cases in 1983. Cases have been reported from all 50 states, the District of Columbia, and four U.S. territories.

308. Public Health Service, Centers for Disease Control, "Update on Acquired Immune Deficiency Syndrome (AIDS) -- United States" (through September 15, 1982). Morbidity and Mortality Weekly Report, September 24, 1982; 31 (37): 507-14.

Between June 1, 1981 and September 15, 1982, the Centers for Disease Control (CDC) received reports of 593 cases of AIDS. Death occurred in 243 cases (41 percent). The incidence of AIDS by date of diagnosis (assuming an almost constant population at risk) has roughly doubled every half-year since the second half of 1979. An average of one to two cases are now diagnosed every day. Although the overall case-mortality rate for the current total of 593 is 41 percent, the rate exceeds 60 percent for cases diagnosed over a year ago. Almost 80 percent of reported AIDS cases in the United States were concentrated in six metropolitan areas, predominantly on the east and west coasts of the country, and approximately 75 percent of AIDS cases occurred among homosexual or bisexual males, among whom the reported prevalence of intravenous drug abuse was 12 percent. The article, which includes a working case definition of AIDS, points out that the entire range of manifestations of the disease may not be included in the definition.

309. Rauch, K.J., G.W. Rutherford and D.F. Echenberg, "Proportion of Cases of AIDS Diagnosed in Outpatients" (Letter). Journal of the American Medical Association, August 15, 1986; 256 (7): 863-64.

This letter to the editor reports on the determination of the proportion of AIDS cases initially diagnosed in outpatients. Two hundred consecutive AIDS cases reported to the Department of Public Health between August 5, 1985 and November 21, 1985 were reviewed. For 58 of those (29 percent) AIDS was diagnosed in an outpatient setting. Kaposi's sarcoma was the most common outpatient diagnosis (60 percent) and Pneumocystis carinii pneumonia was the second most common (33 percent). It is suggested that hospitals and municipal health departments that depend primarily on inpatient-based surveillance and reporting systems may need to consider modifying their approaches to identify cases of AIDS diagnosed in outpatient settings.

310. Selik, R.M., H.W. Haverkos and J.W. Curran, "Acquired Immune Deficiency Syndrome (AIDS) Trends in the United States, 1978 - 1982." American Journal of Medicine, March 1984; 76: 493-500.

Projections and Trends

This report summarizes results of surveillance for AIDS in the United States by the Centers for Disease Control through the first quarter of 1983. Surveillance has been predominantly passive, supplemented by active follow-up of requests to the Centers for Disease Control for pentamidine isethionate for treatment of Pneumocystis carinii pneumonia. The 1,299 reported cases showed trends of increasing incidence among all risk groups: homosexual men (72 percent), intravenous drug abusers (17 percent), persons of Haitian origin (5 percent), persons with hemophilia (1 percent), and others (6 percent). Cases were reported among residents of 35 states and the District of Columbia, with the majority from new York (49 percent) and California (22 percent). Of the 6 percent of patients without well-established risk factors for AIDS, many have suspected risk factors (e.g., blood transfusion or a sexual partner in a high-risk group).

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314. Staff, "German Researchers Predict Higher AIDS Rate." AIDS Record, December 15, 1986; 1 (2): 3.

315. Staff, "Heterosexual AIDS Doubling." Medical World News, November 24, 1986: 8.

STATE ACTIVITIES ON AIDS

The Intergovernmental Health Policy Project (IHPP) at the George Washington University provided the following bibliography of State activities:

316. Intergovernmental Health Policy Project, "AIDS: Legislative Interest Intensifies." State Health Notes, May 1987; 73: 1-3.

Between January 1 and April 15, 1987, more than 360 pieces of legislation related to AIDS were introduced in states around the country, according to a recent IHPP report. This article summarizes those bills, which involve such subjects as procedures for blood and organ donation, research initiatives, and the isolation and quarantine of persons with AIDS. Among the states whose legislative initiatives are described are Virginia, Utah, Colorado, Indiana, Hawaii, South Carolina, Washington, California, New York, Rhode Island, Illinois, New Jersey, and Connecticut.

317. Intergovernmental Health Policy Project, AIDS Related Bills Considered in the 1986 Legislative Sessions. The George Washington University, Washington, D.C., January 1987.

318. Intergovernmental Health Policy Project, An Overview of Specific State Funding for AIDS Programs and Activities. The George Washington University, Washington, D.C., October 1986.

319. Intergovernmental Health Policy Project, A Review of State and Local Government Initiatives Affecting AIDS. The George Washington University, Washington, D.C., November 1985.

320. Intergovernmental Health Policy Project, A Summary of AIDS Laws from the 1986 Legislative Sessions. The George Washington University, Washington, D.C., January 1987.

321. Intergovernmental Health Policy Project, A Synopsis of State AIDS Related Legislation (January - July 1987). The George Washington University, Washington, D.C., August 1987.

322. Rowe, M.J., A Comparative Review of State-Only Expenditures for AIDS: Major Trends, Fiscal Years 1983-1988. State AIDS Policy Information and Research Center, The Intergovernmental Health Policy Project, George Washington University, Washington, D.C., September 1987 (forthcoming).

323. Rowe, M.J. and C. Ryan, AIDS: A Public Health Challenge to the States (Volume I -- Assessing the Problem). State AIDS Policy Information and Research Center, The Intergovernmental Health Policy Project, George Washington University, Washington, D.C., October 1987 (forthcoming).

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324. Ryan, C., M. Rowe and S. Laudicina, *AIDS: A Public Health Challenge to the States (Volume 2 -- Managing and Financing the Problem)*. State AIDS Policy Information and Research Center, The Intergovernmental Health Policy Project, George Washington University, Washington, D.C., October 1987 (forthcoming).

325. Thomas, C., *AIDS: A Public Health Challenge (Volume 3 -- Resource Guide)*. State AIDS Policy Information and Research Center, The Intergovernmental Health Policy Project, George Washington University, Washington, D.C., October 1987 (forthcoming).

TESTING

326. Carlson, G.A. and T.A. McClellan, "The Voluntary Acceptance of HIV-Antibody Screening by Intravenous Drug Users." Public Health Reports, July-August 1987; 102 (4): 391-94.

"Intravenous drug abusers in a methadone program in Minnesota were offered HIV-antibody screening to determine the degree of interest in screening and the extent of infection. Thirty-nine (85 percent) were willing to be tested. Only seven refused. All patients were aware of [AIDS] and their high risk of exposure to the AIDS virus through sharing of injection paraphernalia. None reported exposure to additional risk factors, such as homosexual or bisexual activity or having received a blood transfusion. Of the patients tested, none was positive for HIV antibodies. The high degree of patient interest in screening was unanticipated as was the lack of positive laboratory findings for HIV antibodies. Factors associated with acceptance of testing included patient awareness of high seroprevalence rates, indifference to potential negative social consequences of positive HIV-antibody status, and the voluntary nature of the testing. These findings raise a cautious sense of optimism about HIV-antibody screening for similar risk groups."

327. McCombie, S.C., "The Cultural Impact of the AIDS Test: The American Experience." Social Science and Medicine, 1986; 23 (5): 455-59.

In March 1985, an ELISA test for serum antibodies to human T-cell leukemia/lymphotropic virus type III (HTLV-III) was licensed for use in screening commercial blood products. Controversy over the appropriate use and interpretation of this test continues, and some public health officials in the United States have advocated different counselling strategies for high and low risk individuals with the same test results. The response to AIDS illustrates that contagion has a social definition, even in the context of Western scientific medicine.

328. Meyer, K.B. and S.G. Pauker, "Screening for HIV: Can We Afford the False Positive Rate?" New England Journal of Medicine, July 23, 1987; 317 (4): 238-41.

The results of widespread screening for the human immunodeficiency virus (HIV) are discussed. "Plans to test low-risk populations for HIV antibody generally ignore the possibility of false positive results. . . . [It is suggested that] if the false positive rate is not virtually zero, screening a population in which the prevalence of HIV is low will unavoidably stigmatize and frighten many healthy people. . . . [It is not known what changes screening would make in public health and society.] Hasty and indiscriminate screening for antibody to HIV is imprudent and potentially dangerous, whether we suggest the tests to young women, require them of engaged couples, or impose them on our veterans. HIV screening poses questions that are at once scientific, political, legal, and philosophical."

Testing

329. Staver, S., "AMA House OKs Broad AIDS Policy: Extensive Mandatory Tests Opposed" [Annual Meeting Actions]. American Medical News, July 3/10, 1987: 1, 35-37.

"In a major new policy statement on AIDS, the American Medical Association has approved a wide-ranging set of recommendations that may set the stage for development of [a] national policy on prevention and control of the disease. . . . Many of the report's recommendations deal with the appropriate role of human immunodeficiency virus (HIV) antibody testing. The AMA report endorses mandatory testing of immigrants and prisoners. . . .The report also backs routine voluntary testing of surgical patients who are from areas with a high incidence of AIDS. . . . Education was stressed. . . as being 'the major weapon' against the spread of HIV infection. . . . Specifically, the report emphasized the importance of one-to-one counseling. . . In its recommendations on the funding needed to deal with AIDS, the AMA report said that testing will require 'substantially more resources' than are currently being made available."

330. Zuckerman, M.B., "AIDS: A Crisis Ignored." U.S. News and World Report, January 12, 1987; 102 (1): 76.

This editorial questions the obligations of the crisis of AIDS: Moral, testing, governmental, medical, and educational obligations. The issues are explosive and controversial, and it is suggested that the president should take the initiative and form a national commission on AIDS. "At the heart of the . . . AIDS epidemic, there are fundamental tensions between the rights of the individual to civil liberty and the role of the state in assuring the public welfare."

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341. James, G., "Koch Urges Mandatory AIDS Test For All Foreigners Entering U.S." *New York Times*, June 3, 1987.

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352. Staff, "Doctors' Panel Recommends Limited AIDS Testing." *New York Times*, June 21, 1987.

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